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Glaucoma: Thief of Sight

RICHARD A. PERRITT, M.D., *Chicago, Illinois*

►*All patients, particularly those over age 40, should be aware of the symptoms of glaucoma so that they will seek medical attention early if these appear. If glaucoma develops, the patient should be informed of certain precautions required for long-term preservation of the sight which remains.*◄

Glaucoma is a leading cause of blindness among adults in the United States, one out of every eight blind persons being a victim of this disease. One out of every 40 of the population over age 40 is slowly losing his sight from glaucoma because of ignorance or neglect. Most of these individuals do not realize that they face blindness.

Causes and Symptoms

There are several theories as to the cause of glaucoma, but only the predisposing factors are well known. Among the most common are emotional states, pressures, hereditary predisposition, eyeball smaller than normal, certain drugs taken for gastric distress which affect the size of the pupils, excessive drinking of coffee or other fluids, injury, certain local diseases of the eye, or a combination of all these.

In the first stages of glaucoma, the increased fluid pressure damages only those retinal nerve fibers which have to do with side vision. In the final stages, pressure destroys the nerves which permit front or central vision and all sight is gone. The disease almost always attacks both eyes, but may start in one much sooner than in the other.

There are two main types of glaucoma. The acute type strikes suddenly, causing cloudy vision with severe pain in and around the eye. The chronic type, the more common, works slowly and painlessly. The victim is only vaguely disturbed by the symptoms which come and go and as a result, he postpones visiting the ophthalmologist.

Indications that glaucoma may be present include frequent changes of glasses which do not

seem to improve vision; inability to adjust the eyes to darkened rooms, such as theaters; perceptible or imperceptible loss of side vision; blurred or foggy vision; and rainbows, halos, or colored rings around light. Most distressing of all is the fact that the patient may not have any of these symptoms or signs and still have slowly progressive glaucoma.

Treatment

Blindness from glaucoma can be prevented if treatment is started early. Since sight destroyed by glaucoma can never be restored, for each month that a glaucoma victim postpones treatment, he may lose a small but priceless percentage of his sight.

In treating glaucoma, the physician's primary aim is to reduce the pressure within the eye. The operation to reduce pressure is performed early and requires only a short hospital stay. If drugs are prescribed, they must be used regularly for the remainder of the patient's life.

Since emotional upsets often increase fluid pressure, the glaucoma patient should avoid excitement, anger, worry, and frustration as much as possible. He should be especially careful to keep himself in good health. He may be able to attend movies only occasionally, or not at all. It may also be necessary to limit the period of time he spends watching television, and to limit or avoid the use of coffee and large quantities of fluids. Glaucoma does not become worse by using the eyes. Ordinarily, an affected person can carry on his work as usual while undergoing treatment. Reading, sewing, writing, or playing cards are not ordinarily harmful.

Ten Commandments

The 10 commandments which should be stressed for every glaucoma patient are as follows:

1. Follow your eye physician's instructions carefully. Use the drops as often as advised. Do not let anything interfere. If you are sick or if you are out of town, always continue using your eye drops.

2. Remember especially to return for re-examination at the appointed time and continue to use the drops as instructed, until you see your doctor.

3. Consult your eye physician at once if you see rainbow-colored halos around lights, or if the eye becomes painful, vision is blurred, or if sight is further impaired in any way.

4. Many of the newer drugs today contain ingredients which are injurious to the patient with glaucoma. Always inquire of your physician whenever he

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prescribes medication if the drug contains any ingredient which might increase your eye pressure. Medication for colds, angina pectoris, peptic ulcers, spastic colon, muscle spasms or aches may contain injurious ingredients. The more common of these ingredients are belladonna, belladonna-like derivatives, or anticholinergics.

5. Emotional situations involving excitement, worry, or fear have been harmful to glaucoma patients. Your family and friends should help you to avoid such situations.

6. Coffee, tea, alcoholic beverages, including beer, and tobacco may be harmful. Ask your eye physician. No stimulants are to be used to excess.

7. Avoid dark rooms as much as possible. Ask your eye physician about attending movies and watching television. If movies are permitted, remain for only one feature. In viewing television, always keep a light on in the room.

8. Have a physical examination once a year by your family physician. Ask your family doctor for suggestions about maintaining good general health, such as eating habits, bowel movements, ventilation and temperature in your bedroom, amount of sleep, and physical exercise.

9. Have your dentist check your teeth periodically and correct any defects promptly.

10. Get prompt medical attention for colds, infections, and other illnesses. Avoid exposure to cold air as far as possible.

If the patient follows these rules, he will most likely retain useful sight as long as he lives. They could be the life-line to his sight.◄

Some Useful Technical Improvements in The Surgery of Saphenous Vein Stripping

JULES F. LANGLET, M.D., F.A.C.S.,
Charles Town, West Virginia

►*Development of the surgical resection of varicose veins by the stripping procedure has passed through a phase of instrument creativeness. Now surgeons are beginning to refine their surgical technique of vein stripping and to improve on the total operative procedure, as well as on finer points of patient care.*◄

Prior to the last two decades the only surgical procedures available to the patient with varicose veins of the legs were high or low saphenous vein ligation and subsequent multiple injections of the remaining diseased tributaries with sclerosing agents. With the advent of the stripping procedure, results of treatment of varicose veins changed from palliation to almost complete extirpation of the varices in one operation, and eliminated the multiple-injections which were usually given over a long period of time. In addition, the operation offered improvement in the venous circulation of the leg, better cosmetic result, and less chance of recurrence.

Selection of Stripping Instruments

The intraluminal vein strippers offered by various surgical instrument houses are basically similar: end pieces usually cone-shaped, square, or flat discs, graduated in size and either detachable or permanently fastened to the shaft. The major differences are in the shaft which may be a single, solid rigid wire; in short rigid sections threaded for coupling; twisted strands of cable wire, or cable wire, woven, coiled or spiral. A shaft rod made of polyethylene has been recently introduced.

A notable disadvantage of solid shaft strippers is that they cannot readily be maneuvered through the tortuous veins. The coiled or the spiral wire stripper has more flexibility. The coiled wire stripper, however,

can readily become stretched beyond the point from which it will spring back to its normal shape. When the woven wire stripper is in use the operator may pull on it at an acute angle and bend the wire shaft, causing a kink which will not always return to normal when the shaft is straightened out. The kinked or sprung stripper will tend always to lead to one side, making it impossible to thread the stripper up the vein channel.

Some surgeons who are adept at devising their own instruments have made of speedometer cable from junked cars firm yet flexible strippers in various lengths.

Selection of Patients for Surgery

There are five indications for the stripping operation:

1. Large varicosities.
2. Stasis changes such as dermatitis, ulceration, pigmentation, and chronic induration.
3. A history or evidence of one or more acute attacks of superficial phlebitis.
4. Incompetence of both deep and superficial veins with venous stasis in which the superficial veins are a definite factor.
5. Need for a prophylactic procedure.

Further examinations made for determining the best procedure included a complete physical examination and a careful examination of the legs, using the various tourniquet retrograde filling tests, test for patency of deep venous system, and inspection, with ballottement, for deep hidden veins within subcutaneous tissue.

Ulcerations surrounded by cellulitis of a lower extremity should have, prior to surgery, bed rest, elevation of the affected leg, and control of the infection with hot compresses and possibly antibiotics.

Deep thrombophlebitis should have lasted at least one year before the stripping procedure is undertaken and acute superficial thrombophlebitis should be treated conservatively, stripping procedure being performed after the phlebitis has subsided.

Operative Technical Considerations

The patient should be shaved from the umbilicus to the toes. The preparation of the skin requires only a thorough application of merthiolate or a similar preparation, the legs well painted all around, a leg holder holding the legs up to apply the skin preparation to the posterior aspect.

During the immediate postoperative course, the color of the patient's toes becomes of great concern to the surgeon and the recovery room nurses. Cyanosis is very difficult to ascertain when

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References: 1. Freedman, A.M.: Pediat. Clin. North America *5*:573 (Aug.) 1958. 2. Nathan, L. A., and Andelman, M. B.: Illinois M. J. *112*:171 (Oct.) 1957. 3. Santos, I. M. H., and Unger, L.: Ann. Allergy *18*:179 (Feb.) 1960. 4. Litchfield, H. R.: New York J. Med. *60*:518 (Feb. 15) 1960.

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Babies started on Enfamil stay on Enfamil

1. The Composition of Milks, Publication 254, National Academy of Sciences and National Research Council, Revised 1953. 2. Brown, G.W.; Tuholski, J.M.; Sauer, L.W.; Minsk, L.D., and Rosenstern, I.: J. Pediat. *56*:391 (Mar.) 1960.

Mead Johnson Laboratories

Symbol of service in medicine

the toes have been painted with merthiolate, so the forward half of the foot, including the toes, should be left unpainted, and covered with a stockinette or a sterilized boot.

The usual high and low incisions made at the groin and ankle usually will isolate the two ends of the greater saphenous vein. In order to remove the occasional large varicosities about the dorsum of the foot, an attempt occasionally is made to insert the stripper from the incision made at this level; however, too many times the stripper can not be carried upwards and another incision has to be made at the medial malleolus. Time and effort can be saved if the incision at the medial malleolus is made first and the greater saphenous vein isolated. If large varicosities are present on the dorsum of the foot, the distal end of the saphenous vein trunk can be removed by retrograde stripping. In many cases no effort has to be made to remove these dorsal veins because once the distal end of the saphenous vein is ligated these varicosities are less marked.

In a leg with extensive varicosities several incisions usually are needed to remove the communicating veins, isolation and excision of which can be facilitated if these varicosities have been localized by inspection and palpation prior to surgery, and their position about the leg marked by scratch marks. Too many times large clusters or single dilated veins are missed because, when the patient is supine, the veins have emptied. Preparation of the legs with alcohol and ether or other agent will in many instances wash off the markings, but not scratches made with a sharp needle, with the patient standing, prior to being taken to the operating room. These scratch marks, no matter how lightly made, will become readily recognizable in some 30 minutes.

Some large, incompetent and tortuous varicosities are not readily seen, especially in the case of the obese patient. These varicosities in the deeper subcutaneous tissues can be detected only by palpation or compression, and their course and location outlined; thus, with one hand compressing the vein, while tapping the vein elsewhere with the other hand, one can determine the impact of the ballottement which, if transmitted over a distance of 20 cm., indicates incompetency.

These communicating veins should not be removed until the stripper has been passed into the main greater saphenous trunk. At times, two or more strippers

✓ from emotional instability to the right frame of mind

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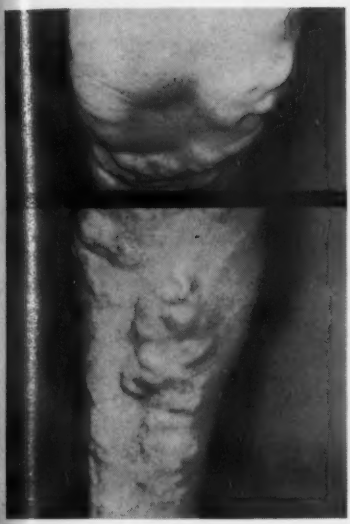

FIGURE 1

FIGURE 2

Large varicosities and incompetent greater saphenous veins about the knee and lower leg (Fig. 1). Postoperative view of the leg some six weeks later. Note the long S-shaped incision which almost encircled the leg and was made to include varicosities from the greater and lesser saphenous veins (Fig. 2).

will have to be used. If the communicating veins are removed before the main saphenous trunk is channeled with a stripper, the main trunk can become almost impossible to strip out because of distortion and avulsion at various points. The incisions for removal of communicating veins will heal more readily if they are made in the direction of normal skin lines, and the cosmetic result will be better.

The removal of several clusters of varicosities close together yet separated by areas of normal-appearing tissue can be accomplished by dissection through a long S-shaped incision extending over the entire length of varicosities. (Figures 1 and 2.) The resulting exposure is more ample, and a more thorough dissection can be performed. The incision heals as rapidly as the multiple small incisions and the operative scar is minimal.

The perforators and communicating veins about the calf and

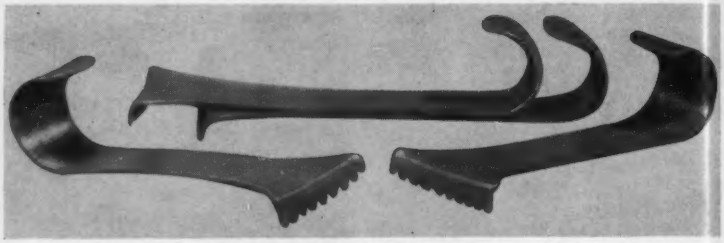

FIGURE 3

Small retractors with a depth of less than one quarter of an inch about the rack-like-end will allow the operator to work close to the exposed communicating veins. When such a pair of retractors is used, a short straight incision that is only skin deep is widened into an elliptical space.

thigh usually can be readily dissected free; perforators that extend down along the sides of the tibial bone should be dissected cautiously since they can be easily torn, and hemostasis in this area is controlled at times only with great difficulty.

Skin retracting has proved cumbersome. Most small skin retractors have a curved rack-like end which can separate the edges of the skin incision well; however, the end does not allow the operator to work close to the exposed veins. Retractors were constructed less than ¼ inch thick about the rack, that would spread the skin edges in an elliptical curve. (Figure 3.) Small multiple teeth about the rack held the thin skin edges firmly and a single curved handle of various lengths sufficed. In working in a shallow small space the retractors, as well as the assistant's hands, were well out of the operative field.

After stripping the main saphenous vein, the resulting flash bleeding can be controlled by manual pressure along the course of the excised vein. The varicosities about one leg may be so numerous that, with all the necessary incisions needed to do an adequate stripping, the patient loses considerable blood, and if surgery on the other leg is done the total blood loss will be too great. This can be avoided if, during the stripping on the first leg, blood is replaced as it is lost. Other control of bleeding is by wrapping the first leg with an elastic bandage immediately after stripping. The bandage can be used as a wrapper until the end of the procedure, when elastoplast can be permanently applied.

The ideal situation when bi-

lateral vein stripping is indicated is for two teams of surgeons to work simultaneously, each team on a separate leg. The only hazard is contamination because of working in such close quarters.

The skin incisions which will be noticeable are closed with subcutaneous catgut, and usually heal well. Small incisions made about the distal end of the saphenous vein at the medial malleolus heal poorly as they are at a flexion crease, and are occasionally sites of irritation from footwear. They readily become infected and should, therefore, be closed with vertical mattress non-absorbable sutures.

The practice of using cloth elastic bandages to wrap the legs after stripping has been gradually abandoned. The main disadvantage of these bandages was the edges rolled and so the wrapper became uneven. The addition of adhesive tape around the leg to keep the elastic bandage in place added another disadvantage: the tourniquet effect caused by the encircling adhesive tape.

Elastoplast now appears to be the ideal bandage. It remains in place, with little rolling of edges. To eliminate the tenderness caused by its removal from shaven legs, open 4 x 4 sponges or wide gauze strips can be placed over the entire surface of the leg prior to its application. Beginning at the ankle, the elastoplast is wrapped clockwise on the right leg and, if the first roll reaches up to the knee, the second roll is applied counterclockwise. A better turn of elastoplast is now made about the upper thigh to cover the incision at the femoral fossa. The same method can be used on the left; here, however, the first roll is applied counterclockwise and the second clockwise.

The patient should be up and about immediately after he has recovered from the anesthesia. During convalescence, the patient should prop the leg on a stool when sitting and should never sit with legs dangling or crossed at the knee. He should be instructed carefully in this regard.

Conclusion

The development of the surgical resection of varicose veins by the stripping procedure has passed through a phase of instrument creativeness. Now surgeons are beginning to refine their surgical technique of vein stripping and to improve on the total operative procedure, as well as on the finer points of preoperative, operative and postoperative care. Recorded here are some technical considerations which can be helpful in carrying out the stripping procedure successfully.◀

Masking Agent as Adjunct Therapy in Cutaneous Disorders

MILTON REISCH, M.D., *New York, New York*

▶*This agent improved mental outlook in patients with unsightly acute and chronic skin diseases. It did not interfere with accepted therapeutic methods. Patients were able to continue daily routines without fear of ridicule or rejection. None of the patients evidenced allergic reactions to the preparation.*◀

The ancient Egyptians resorted to many preparations in an attempt to camouflage permanent or temporary skin disfigurations. The patients submitted to many long and tortuous proceedings, and underwent treatment with the most nauseating and repulsive concoctions. Medical and historical texts did not hesitate to give formulas and specific instructions for concealing major or minor imperfections of the skin.[1-6] Thus, the search for masking preparations which effectively disguise disfiguring birthmarks, scars, and skin diseases is almost as old as civilization.

Currently used treatments for hemangioma simplex, nevus flammeus, telangiectatic hemangioma, vitiligo, and chloasma are far from satisfactory. Therefore, patients with these disorders go from physician to physician until they become discouraged. They are constantly embarrassed because they are forced to explain the cause of their distressing appearance. The self-consciousness, unhappiness, and emotional trauma which these patients undergo often aggravates the somatic problem.

It is almost the unanimous opinion of leading dermatologists[7] that psychogenic factors play an important role in the

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production and/or perpetuation of skin diseases. Therefore, treatment very often includes therapy for the relief of the pathologic processes and therapy for the relief of the underlying emotional problems. The mental and emotional difficulties are frequently more difficult to diagnose and treat than the somatic problems.

Material and Methods

A flesh-toned foundation* with a medicated, non-irritating base which can completely conceal affected areas, match the surrounding skin, and cause nevi or scars to become undetectable has been used clinically for several years. In addition to its masking properties, this preparation is neutral, hypo-allergenic, sunproof, and waterproof. The consistency is such that it will not run or rub off, crack, or flake and so will not produce a mask-like appearance. The illusion of a beautiful skin and complexion is so perfect, when properly applied, that patients are enabled to enter business and undertake professional roles which would otherwise be closed to them.

In addition to being used for concealment of nevi, scars, and skin blemishes, this agent has been used to mask such chronic and acute skin disturbances as acne, psoriasis, chronic discoid lupus erythematosus, atopic dermatitis, necrobiosis lipoidica diabeticorum, neurotic excoriations, rosacea, tattoos (traumatic or artistic), and telangiectasia. Most of these cutaneous conditions can be treated effectively by medical or surgical means; however, because of their unsightliness and the length of time necessary for treatment, this cream is used to conceal the condition between treatments.

In a series of 26 selected patients with chronic and acute skin conditions, all of whom had personality problems, Covermark was used in addition to the regular therapy. These case histories are indicative of the results which may be obtained.

Case Reports

1. Man, age 48. Patient has had generalized psoriasis for 20 years. Response to office therapy was poor, but there was complete clearing of lesions when hospitalized for long periods. During summer, lesions recur especially on the hands and arms. Lesions are aggravated by sunlight. Unable to carry on normal activities because of his appearance. With the use of the masking agent he is comfortable and well adjusted. During the summer he can wear short-sleeve shirts and go into the sun without further irritation.

2. Man, age 27. While in the armed service during World War II, he was tattooed. He avoided going to the beach or wearing short sleeves during the summer because of this tattoo. With the use of the masking agent he has been able to work in short sleeves,

*Covermark®, Lydia O'Leary, Inc., New York, New York.

o to the beach, and wear sport shirts. he area is waterproof so that he feels ee to swim as well.

3. Woman, age 43. Neurotic excoriions for five years. Psychiatric therpy was of no value. She has been reatly disturbed by the appearance f the healed scars. With the use of te masking agent the scars are hardl noticeable. She is now able to carr on her normal activities without attracting attention. Her mental condition appears to be greatly improved.

4. Woman, age 73. This patient has had chronic discoid lupus erythematosus for about 20 years. She has had severe scarring with depigmentation. No surgical technique is of value in making the scars less obvious. With the use of the masking agent properly applied, she has been able to mingle with people and carry on her daily work. (See Figures 3 and 4).

5. Woman, age 38. Patient has had neurotic excoriations for two years. The scars are very obvious, drawing attention to her appearance and creating many comments. She has become withdrawn and morose. With the use of the masking agent her scars seem to disappear. She has returned to her normal social activities without difficulty and is emotionally greatly improved.

6. Woman, age 42. Marked scarring following the resolution of severe cystic acne. Plastic procedures have been of some value. Patient extremely disturbed over her appearance and was developing a pugnacious personality. With the use of the masking agent the scars are hardly noticeable. This aid has reduced the patient's concern about her appearance and she is showing marked personality improvement.

7. Woman, age 18. Patient had had extensive electrolysis performed for hirsuties of the inner aspect of thighs. The resulting temporary hyperpigmentation disturbed the patient. With the use of the masking agent she was able to wear shorts and go swimming without attracting attention.

8. Woman, age 62. Patient has had psoriasis of legs for 30 years. Because of aggravation of lesions by sunlight, patient has been unable to participate in summertime activities or wear nylon hose. With the use of the masking agent lesions are disguised and sunproofed. She is now able to carry on normally and goes freely to the beach or park. She has also been able to wear sheer hose without anyone noticing the psoriatic lesions.

9. Woman, age 54. Patient has had necrobiosis lipoidica diabeticorum for 10 years. Because of the erythema and atrophy, the lesions were obvious and could not be disguised with stockings. Local steroid injections for a period of two years caused resolution of lesions. During this interval of therapy she applied the masking agent which effectively concealed her problem. (See Figures 1 and 2).

10. Woman, age 56. Patient, who has generalized scleroderma, was greatly disturbed by the marked telangiectasia of the face. The masking agent effectively covered the areas and restored confidence in her appearance.

11. Woman, age 22. This young lady has had neurodermatitis since childhood. As a result of chronic irritation, an area of hyperpigmentation and depigmentation as well as telangiectasia has developed. With the use of the masking agent the area has been made less obvious and is protected against sunlight. She is able to carry on normal activities as well as swimming.

12. Man, age 30. An actor tattooed while in service. He now considers the tattoo as a defect. He would dress alone and not go to summer resort areas because of the tattoo. With the use of the masking agent he feels free from his defect, is able to go swimming and sunbathe without any embarrassment. (See Figures 5 and 6).

13. Woman, age 40. This patient has had psoriasis of legs for past 10 years, resistant to all types of therapy as well as being aggravated by exposure to sunlight. With the use of the masking agent she has been able to go on vacation and enjoy swimming and

sunshine without aggravating the lesions or attracting notice. She is able to wear sheer stockings without attracting attention to the eruption on her legs.

14. Man, age 27. Patient had psoriasis on arms. He was unable to wear short-sleeve shirts in the summer. With the use of the masking agent he was able to cover the lesions when he went swimming, sunbathing, or working. Under treatment the lesions cleared. The use of this agent did not interfere with therapy.

15. Woman, age 21. A professional model, whose appearance is her livelihood, had acne and scarring of face and forehead. While under treatment she was able to use the masking agent for concealing lesions while working. Covermark did not aggravate the acne or interfere with the therapy.

16. Woman, age 48. Patient had extensive necrobiosis lipoidica diabeticorum for eight years. Under treatment with parenteral hydrocortisone, the lesions subsided in 18 months. During this interval, she used the masking agent to effectively conceal lesions.

17. Woman, age 42. Patient has severe post-acne scarring and scarring associated with dermatitis herpetiformis. Had been treated with several plastic procedures with slight success. With the use of the masking agent, the remaining scars were made less evident. Before using the preparation patient developed, as a defense mechanism, a careless attitude towards her personal appearance. Since having the protection of Covermark, she has resumed her normal activities and is well adjusted.

18. Woman, age 28. Patient had rosacea, markedly florid. Because of her condition she would not go to work. With the use of the masking agent she was able to conceal the eruption effectively and maintain a position; she continued treatment to resolution of her condition.

19. Woman, age 55. Patient has hyperpigmentation as result of varicose veins. With the use of the masking agent, she is able to hide discoloration and can wear sheer stockings or go bathing without attracting attention.

20. Woman, age 32. Patient has acne rosacea with scarring. With the use of the masking agent, she was able to conceal the lesions without interfering with therapy.

21. Woman, age 21. Patient has severe cystic acne with scarring. She was able to continue treatment and use the masking agent to effectively conceal the eruption and scars.

22. Woman, age 18. Patient had acne scarring that was minimal. However, she was disturbed by its appearance. With the use of the masking agent she was able to overcome her anxiety and continue her regular work.

23. Woman, age 48. Patient had had extensive plastic surgical treatment with improvement of scars. With the use of the masking agent she was able to more effectively conceal the still evident scars.

24. Woman, age 48. Patient had neurotic excoriations with scarring. During an acute emotional upset, she developed new lesions which she was able to effectively conceal with the masking agent.

25. Woman, age 24. Patient has severe cystic acne with a florid complexion. The masking agent effectively concealed the erythema and scars.

26. Woman, age 45. Patient was troubled with fine varicose veins on her legs. No effective therapy is known. With the use of the masking agent, she was able to wear shorts in warm weather and go swimming, the pigmentation being effectively concealed.

Conclusions

None of these patients evidenced allergic reactions to the masking preparation. During the treatment of a patient with acne vulgaris there was some concern

CONCEALMENT OF SKIN DISORDERS WITH MASKING CREAM

FIGURE 1
BEFORE

NECROBIOSIS
LIPOIDICA
DIABETICORUM

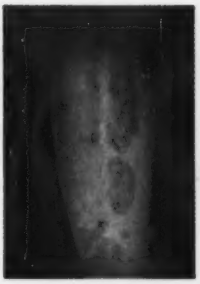

FIGURE 2
AFTER

NECROBIOSIS
LIPOIDICA
DIABETICORUM

FIGURE 3
BEFORE

CHRONIC
DISCOID
LUPUS
ERYTHEMATOSUS

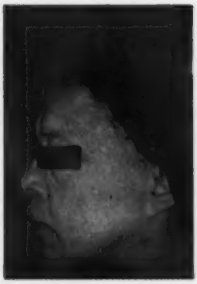

FIGURE 4
AFTER

CHRONIC
DISCOID
LUPUS
ERYTHEMATOSUS

FIGURE 5
BEFORE

TATTOO

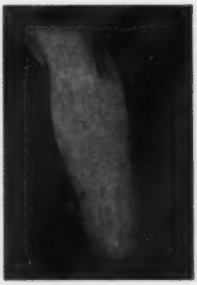

FIGURE 6
AFTER

TATTOO

that Covermark would interfere with therapy. The procedure proved highly satisfactory with no interference in the activity of the medications. The preparation probably had additional benefits to the psoriatics since it is sunproof and therefore acted as a protective agent to those sensitive to sunlight.

Summary

A protective, masking, and concealing agent improved the mental and emotional outlook in patients with unsightly acute and chronic skin diseases. It did not interfere with accepted therapeutic methods. Children, adolescents, and adults were able to continue their daily routine without fear of ridicule or rejection and with the feeling of uplift so necessary to their feelings of wellbeing and personal worth.◀

Toxoplasmosis

Three proved cases of toxoplasmosis, which is apparently transmitted to humans from infected animals, have been diagnosed in one area of Kentucky in the past 5 years. The disease presents itself in many forms due to the variation in virulence of the strain and in resistance of the host. The different clinical forms are congenital or neonatal meningo-encephalitis, usually associated with hydrocephaly, chorioretinitis, cerebral calcifications and convulsions; atypical encephalitis; postencephalitis sequelae; and pneumonitis, with fever and rash.

Acquired toxoplasmosis usually occurs as an acute encephalitis with headache, convulsions, disorientation, coma, almost constant twitching of isolated muscle groups, and a marked fever. Patients frequently develop pneumonia with maculopapular, bright red to pale pink skin rash over the entire body except the palms, soles and scalp. Symptoms of the disease may develop in the central nervous system after apparent recovery.

The sulfonamides, with the exception of sulfanilamide, have shown good results. Acute cases should be treated for 2 to 3 weeks with sulfadiazine or sulfamerazine in full doses. This allows the patient time to develop enough antibodies to prevent a relapse, but does not kill the toxoplasma. It might be well to continue treatment longer to prevent reinfection of the host.

Clarke, W. F., *J. Kentucky M.A.*, 58:1044-1047, 1960.

In urinary tract infection

NEW
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controls the infection

"THIOSULFIL"-A FORTE combines the *sulfonamide specific* for urinary tract infection with a *potent analgesic* for prompt, soothing relief of local discomfort.

Recommended in *acute* urinary tract infection, such as cystitis, urethritis, pyelitis, pyelonephritis, and prostatitis due to bacterial infection amenable to sulfonamide therapy. "Thiosulfil" has been effective against the following urinary pathogens: *Proteus vulgaris, Pseudomonas aeruginosa, Escherichia coli, Streptococcus fecalis, Escherichia intermedium,* and *Aerobacter aerogenes.* In individual cases, sensitivity of the organisms may vary. Sensitivity tests, preferably by the tube dilution method, should be done first, for guidance as to alternate therapy in case "Thiosulfil"-A Forte does not control the infection.

USUAL DOSAGE: **Adults:** 2 tablets, four times daily.
Children: (9 to 12 years). 1 tablet, four times daily.

WARNING: Due to the high solubility in body fluids of "Thiosulfil" and its acetyl form, the hazards of renal tubule obstruction are minimized. The usual precautions exercised with sulfa drugs generally should, however, be observed. In those rare instances where exanthemata, urticaria, nausea, emesis, fever or hematuria, are encountered, administration should be discontinued.

CONTRAINDICATIONS: (1) a history of sulfonamide sensitivity and (2) due to the phenylazo-diamino-pyridine HCl component, renal and hepatic failure, glomerulonephritis, and pyelonephritis of pregnancy with gastrointestinal disturbances.

SUPPLIED: "Thiosulfil"-A Forte—No. 783: Each tablet contains sulfamethizole 0.5 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000.

also available: "Thiosulfil"-A—No. 784 Each tablet contains sulfamethizole 0.25 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000.

USUAL DOSAGE: *Adults:* 2 tablets, four times daily.
Children: (9 to 12 years): 1 tablet, four times daily.

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Melozets has long been recognized as a useful and effective adjunct to low-calorie diets in the management of obese patients. The rationale is a simple one. A wafer or two of Melozets taken with a glass of water before meals supplies bulk as a mechanical means to overcome the empty, gnawing feeling to which chronic overeaters so easily surrender. Melozets makes dieting easier.

Especially Valuable with 900-Calorie Dietaries—Melozets and the new 900-calorie complete dietaries, taken together, can form the basis of a highly effective weight reduction program for many patients. Melozets is particularly valuable in such a regimen because it helps maintain physiologic balance. Melozets acts in much the same way as natural bulk foods, supplying methylcellulose to encourage normal bowel function.

Tastes Like Graham Crackers—Patients readily accept Melozets as part of the diet because it comes in such a convenient and pleasant-tasting form. The methylcellulose wafers are crisp and appetizing. They look and taste like graham crackers. Each wafer contains 1.5 Gm. of methylcellulose in a wheat flour base together with sugars, salt and other flavors. One wafer is equivalent to 30 calories.

Suggested Dosage—As an adjuvant in the management of obesity, one or two wafers of Melozets may be taken before meals or when hungry. Not more than eight wafers should be taken in any twenty-four hour period. In planning the diet due consideration should be given to the caloric value of the wafers. To ensure adequate hydration of the methylcellulose, it is essential that a full glass of water or some other suitable liquid be taken with each wafer.

Economical to Take—Melozets is supplied in one-half pound boxes, each box containing approximately 28 wafers. Thus the benefits of dieting with Melozets may be realized for only a little more than one dollar per week.

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Double-Blind Study of a Sympathomimetic Amine and a Placebo in Obesity

EDWIN A. COATS, M.D., and
RAYMOND C. POGGE, M.D., *Lincoln, Nebraska*

►*In a dosage of 4 mg., the drug being investigated effectively inhibited appetite in those patients who received it first. It did not overcome the psychologic effect of the placebo if the placebo was given first. The compound in single doses up to 10 mg. in the daytime or at night was well tolerated.*◄

A study was designed to determine whether humans could tolerate phenyl-tertiary-butylamine HCl* without unpleasant subjective sensations of central stimulation; and, if so, whether well-tolerated doses of this sympathomimetic amine inhibit appetite in obese patients. This possible use of the new compound was investigated because in animals it showed only feeble or questionable activity as a central stimulant and because other sympathomimetic agents have been found to be useful adjuncts in the dietary treatment of obesity.

*Wilpo™, Dorsey Laboratories, Lincoln, Nebraska.

Experimental Design: Part One

Gradually increasing doses of the agent were administered to 50 normal adults according to the following dosage schedule:

1st Day:	2 mg.	morning	2 mg.	night
2nd Day:	4 mg.	"	4 mg.	"
3rd Day:	6 mg.	"	6 mg.	"
4th Day:	8 mg.	"	8 mg.	"
5th Day:	10 mg.	"	10 mg.	"

The subjects did not know what type of medication was being tested or what subjective sensations might be expected. However, they were told that they might feel different and that their sleep might be different. Accordingly, they completed a form indicating for each day whether or not they felt any effect of the medication during the day and whether they slept well or poorly. If they experienced any subjective sensation during the day, they were to try to describe it and to indicate on which day it occurred so that the dose producing (or possibly producing)

the effect would be recorded.

Results of Part One

Daytime Administration

Almost half (24 of 50) of the subjects were able to discern no subjective sensations whatever, even from the maximum dose of the drug given during the day, whereas 12 per cent (6 of 50) recorded some type of sensation even from the smallest dose (2 mg.) tested. The maximum daytime dose tolerated without any subjective response attributed potentially to the drug was 0 in six patients, 2 mg. in 11, 4 mg. in five, 6 mg. in three, 8 mg. in one, and 10 mg. in 24.

The nature of the subjective sensations reported varied considerably and many were probably not caused by the medication. Qualitatively, the sensations were, for the most part, pleasant. In degree, they were generally mild. One of the 50 test subjects became nauseated after taking 2 mg. Since the same person has reported nausea as resulting from a wide variety of other medications, the significance of this side effect is questionable. She objected to being retested, so the response to a placebo is not available for comparison. Table 1 contains a list of the effects reported and the number of persons experiencing the various sensations at different dose levels.

Bedtime Administration

Just as many persons tolerated the maximum dose of the drug during the day without noticing any change in behavior or sensation, so did a substantial number of them (20 of 50) observe no effect upon sleep pattern even when the maximum dose of 10 mg. was taken at bedtime.

The maximum dose of the sympathomimetic for each of the 50 subjects, taken at night without producing insomnia, was 0 mg. in two subjects,† 2 mg. in seven, 4 mg. in eight, 6 mg. in eight, 8 mg. in five, and 10 mg. in 20.

The incidence of spontaneous insomnia was not estimated for this group, nor was the effect of a placebo upon sleep pattern determined. However, insomnia does not appear likely to be a common side effect of the drug when administered in dosage of 4 or 8 mg. before meals. Half of the test subjects tolerated 8 mg. or more, taken at bedtime, without suffering insomnia. Therapeutic doses can, therefore, be given to most patients without evoking unpleasant side effects. When a pharmacologic effect upon the central nervous system

†One of these subjects complained of insomnia after a dose of 2 mg. at bedtime and the other was the one who reported nausea during the day after 2 mg. and then refused to take any more of the medication.

TABLE 1

EFFECTS OF *WILPO* IN 50 SUBJECTS

	ORAL DOSE [MG.]					TOTAL NO. SUBJECTS*
	2	4	6	8	10	
Increased energy	4	3	1			8
Anorexia	1	3		1		5
Fatigue		1	1	2	1	5
Headache		1	2	1		4
Vertigo or blurred vision				2	1	3
Cramps or diarrhea		1		1		2
Nervous or "jittery"	1	1				2
Rhinorrhea		2				2
Stomach ache or nausea				1		1
Tingling		1				1
Dry mouth and nose			1			1
Early awakening without fatigue	1					1
No sensation discernible						24

*Sum is greater than 50 (total of subjects) because some people reported more than one sensation.

does manifest itself, it is usually mild and pleasant.

Experimental Design: Part Two

The obesity studies were designed to compare the efficacy of 4 mg. of the agent taken 30 to 60 minutes before each meal with the efficacy of a placebo taken similarly. Double-blind conditions were observed. No specific diet was used but the subjects were told that the medicine would help control appetite so that they could expect to lose weight simply by eating less food at each meal. Two groups of subjects were studied.

Group I consisted of 62 obese members of a religious group who volunteered for the study, partly because of a desire to lose weight and partly because of the charitable contribution which was promised to the religious group in appreciation of the cooperation. One of the doctors explained the project to the group and then collected cards with names and addresses of the volunteers. The cards were then arranged alphabetically and the placebo and genuine medication were dispensed on an approximately alternate basis. When there was more than one volunteer in a single household, all members received the same medication. This eliminated the risk involved if one volunteer inadvertently took another's tablet. The weight of each subject

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PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

was recorded in the space provided on the bottle given him. After four weeks, the bottles were collected, the number of unadministered tablets counted, and any change in body weight recorded. Each subject then received another bottle which contained the opposite type of medication. At the end of the second four-week period, each subject had had a course of Wilpo therapy and a course on the placebo. Approximately half of the people had each type tablet for the initial period of treatment.

Group II consisted of 19 employees of the Dorsey Laboratories who consulted personnel of the Plant Health Department requesting "reducing pills." These individuals were motivated by the desire to lose weight. They requested medicine because they knew that investigational supplies of a tablet not yet on the market were available. The tablets were dispensed in bottles of 84 (sufficient for three per day for four weeks) by the Plant Nurse under the direction of the Medical Director. The random distribution of placebo and medication as well as observation of double-blind technique was achieved by a simple device. The tear label on each bottle of medication was folded in such a way that the nurse could dispense the bottle to the patient without reading that portion of the label that was folded inside. On the back of the label she recorded the name of the subject and the date. The label went, still folded, to another person who recorded whether the individual had started with placebo or Wilpo. The same person then prepared the next bottle containing the opposite type by removing that portion of the label which identified the medication. The nurse was given the proper bottle to dispense to each individual when he returned at the end of the first four-week course of therapy.

Experimental Results

The results for each group were subdivided according to whether the subject happened to be given Wilpo first or placebo first (see Table 2). This is important, because the dose of Wilpo selected turned out to be borderline: it was demonstrably effective when given first; however, the psychologic effect of an unsuccessful preliminary course of treatment with placebo interfered with the efficacy of Wilpo at this dosage level.

The groups are defined as follows:

1. Group I-A—Religious group, Wilpo first course, placebo second.

2. Group I-B—Religious group, placebo first course, Wilpo second.

TABLE 2

EXPERIMENTAL RESULTS IN 81 SUBJECTS

	Number Gaining	Number Unchanged	Number Losing	Total
Group I-A				
Wilpo	2	2	31	35
placebo	6	12	17	35
Group I-B				
placebo	5	8	14	27
Wilpo	2	13	12	27
Group II-A				
Wilpo	0	1	10	11
placebo	6	3	2	11
Group II-B				
placebo	3	0	5	8
Wilpo	0	1	7	8
Totals				
Wilpo	4	17	60	81
placebo	20	23	38	81

GROUP RESULTS

WILPO GIVEN FIRST AND PLACEBO GIVEN FIRST

	Number Gaining	Number Unchanged	Number Losing	Total
Wilpo first				
Wilpo	2	3	41	46
Placebo	12	15	19	46
Placebo first				
placebo	8	8	19	35
Wilpo	2	14	19	35

3. Group II-A—Industrial group, Wilpo first.

4. Group II-B—Industrial group, placebo first.

In doses of 4 mg., the sympathomimetic amine was more effective than a placebo in reducing the appetite, but the efficacy was greatly decreased by pretreatment with a placebo. In terms of average weight loss per period of four weeks this is also true,* although these figures are confused somewhat by two individuals in Group II-B. These two subjects voluntarily went on a rigid diet and were so enthusiastically cooperative that they lost 25 and 11 pounds, respectively,

*Statistical analysis by Harry L. Rubenkoenig, Technical Director, Hill Top Research Institute, Inc., Miamiville, Ohio revealed T=2.34, indicating significance above the 95% level of confidence (T=2.0) but below the 99% level (T=2.6).

during the first course (placebo) and then only 22 and 5 pounds, respectively, during the second course on Wilpo.

TABLE 3

AVERAGE INDIVIDUAL WEIGHT CHANGE IN 4-WEEK PERIOD

GROUP	WILPO	PLACEBO
I-A	—3.1 lb.	—1.2 lb.
I-B	—1.07 lb.	—1.18 lb.
II-A	—4.45 lb.	+0.5 lb.
II-B	—5.3 lb.	—5.9 lb.

In both of the "A" groups (Wilpo first, placebo second course), the superiority of the drug over the placebo is apparent (Table 3). In the other two groups, there is no difference.†

Side Effects

Each of the 81 persons in the two groups received both placebo tablets and tablets of the medication. All four side effects reported occurred when the subject was taking placebo tablets and none when he was taking the medication. Constipation was reported twice, abdominal cramps once, and a skin reaction which cleared when the placebo was stopped and re-appeared when administered again occurred once.

†The results tabulated include findings in all 81 subjects who took the medication. There were seven other subjects, all in the religious group, who discontinued medication shortly after starting. Three of these, all starting on the placebo, discontinued on advice of their personal physician. Two (one on placebo, and one on medication) stopped without giving any reason. One on medication stopped because of a back injury and influenza. One on placebo stopped because of constipation which was considered to be a side effect.

Discussion

At the dosage level of 4.0 mg. before each meal, the drug is well tolerated. No side effects were attributed to it even though four of 81 subjects did complain of side effects from the placebo. A definite diminution of appetite was apparent at this dosage level, if the individual was started first on the drug and switched later to a placebo. Inhibition of this effect by pretreatment with a placebo indicates that 4 mg. of the drug is a borderline or minimal therapeutic dose.

None of the 81 test subjects received any formal dietary instruction. The study was set up simply to determine whether obese patients would eat less, as measured by changes in body weight, on a 4 mg. dose of the drug than on a placebo. In practice it would seem highly desirable to give dietary instructions, certainly to avoid pretreatment with a placebo, and probably to give a larger dose of medication.

The industrial group lost more weight, under all conditions except during the placebo period following the drug, than did the religious group. This probably reflects a difference in motivation. A patient who seeks medical care from a private physician, pays for medical advice, pays for the medication, receives personal guidance from the doctor with

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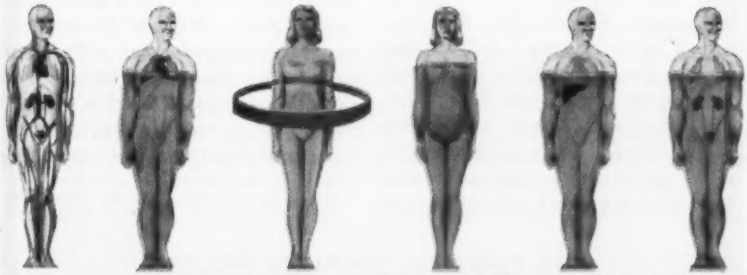

HYPERTENSION CONGESTIVE FAILURE PREMENSTRUAL TENSION EDEMA OF PREGNANCY CIRRHOSIS WITH ASCITES RENAL EDEMA

respect to dietary habits as well as concurrent medical and psychologic problems, should receive an even more highly gratifying result from the adjunctive use of the drug than would the subjects in either group reported in this text.

Summary and Conclusions

A new sympathomimetic amine was given experimentally to 131 human subjects. In the first portion of the study, the compound in single doses up to 10 mg. during the day or at bedtime was generally well tolerated. In the second portion of the study, the drug in dosage of 4 mg. before each meal effectively inhibited appetite in those patients who received it first. However, at this dosage level, it did not overcome the psychologic effect of the placebo if the placebo was given first. The side effects reported in this study were all attributed to the placebo; none occurred during periods of treatment with the test drug.◀

Adenomatous Polyposis of the Stomach

Of 20 patients operated on for this condition over a period of 9 years, all were aged 50 to 73 and 11 were women. There was family history of polyposis in 3 instances. Nine had diffuse gastritis, this being hypertrophic in 5, atrophic in 2, and mixed in the remainder. Thirteen of the 20 had either incipient or actual malignant change. The disturbances were always related to meals. In 5, vomiting occurred soon after meals, bringing relief of symptoms. Cancer was found histologically in 3 of 9 considered benign on x-ray examination, and a typical adenoma in 5 suspected of having cancer.

Fourteen patients had subtotal gastric resection, 6 polypectomy. On followup 1 to 10 years after operation, 8 patients were in good general condition, one had a local relapse, one had peritoneal carcinosis 3 months after gastric resection, 2 had died of unknown cause, and 8 were lost to followup. The difficulty of exact clinical, x-ray, and even operative diagnosis may be largely overcome by the use of rapid frozen section during the course of the operation.

Naldini, G., & Salvini, A., *Arch. ital. chir.*, 85:303-319,1959.

Ectopic Pregnancy

DAVID R. HOLMES, M.D.,* *Independence, Missouri* and
WILLIAM H. MASTERS, M.D.,* *St. Louis, Missouri*

►*When the clinical diagnosis of ectopic pregnancy is not obvious, hospitalization with careful observation is immediately in order. Adequate cul-de-sac investigation will provide the most useful and reliable information. Surgery, if indicated, should be immediate but strongly conservative in character.*◄

Ectopic pregnancy is the implantation of a fertilized ovum anywhere other than within the uterine cavity. The most common site of ectopic implantation is the ampullar portion of the Fallopian tube. However, implantation sites have been demonstrated within the ovarian capsule, in the isthmial and interstitial tubal areas, intra-abdominally, and even within the cervical canal. Probably the basic cause for the intra-abdominal or ovarian implantation is abortion of the conceptus from the tubal fimbria. The subsequent transfer of vascular supply for the conceptus to the omentum, the intestines, or even the ovarian capsule and the infundibulopelvic ligament develops as the placental function expands.

At St. Louis Maternity Hospital over a 20-year period there were 63,276 deliveries with 325 surgically established ectopic pregnancies. This provides a ratio of one surgically demonstrable ectopic implantation for every 195 deliveries, an incidence of 0.5 per cent. This is well within the range of other reports on the incidence of ectopic pregnancy, which vary from 1 in 30 to 1 in 303 deliveries.

Any pathologic situation which prevents or delays the egress of the rapidly enlarging conceptus to the uterine cavity may be responsible for an ectopic implantation. Post-abortal infections, postpartal endometritis, or gonorrheal salpingitis may impede passage of the fertilized ovum by the post-infectious development of adhesions which may partially obstruct the tubal lumen. In addition, the lumen may

*Department of Obstetrics and Gynecology, Washington University School of Medicine.

be partially or completely obstructed by gross distortion of the serosal surfaces of the tubes from peritoneal-based adhesions. Previous pelvic surgery, abdominal peritonitis, or pelvic endometriosis may also set the stage for ectopic pregnancy. The pathologic result of these clinical entities is severe interference with tubal motility, and ultimately of tubal patency.

Transmigration of the ovum from an ovary to the opposite tube has also been noted in some 25 per cent of all surgically proven cases of ectopic implantation in the present series. This physiologic phenomenon is thought to result in larger size of the ovum (as a result of delay during migrational activity), with ultimate simple mechanical obstruction within the isthmial or interstitial portions of the tube. Congenital malformations, such as bicornate uterus, as well as the nebulous state, "tubal spasm," may possibly interfere with or prevent the normal progress of the fertilized ovum toward the endometrial cavity.

It has been noted that roughly 5 per cent of all patients who have ectopic pregnancy demonstrated at surgery have a history of previous ectopic gestation. The figures in the present series agree well with others reported. Although ectopic pregnancy may occur at any time during a woman's reproductive years, the greatest incidence has repeatedly been noted to be in the 10-year group of 26 through 35 years. It has also been generally observed that ectopic pregnancy occurs more commonly in patients of low parity.

Symptoms

The typical triad of ectopic pregnancy symptoms consists of pain, amenorrhea, and vaginal bleeding. Pain is by far the most frequently encountered symptom, reported as occurring in 90 to 100 per cent of all cases. More than 95 per cent of all the patients reported in the present series experienced pain, with localization to one or both of the lower abdominal quadrants in 56 per cent of the cases.

The pain complex varies considerably in type of onset and severity of expression. The onset may be sharp and stabbing in character, or a dull aching, or indeed, any variant of these basic patterns. Quite frequently localization of pain is in the back, the rectum, the diaphragm, or the shoulders as a result of peritoneal irritation secondary to rupture of, or drainage from, the implantation site. Not infrequently, there is sudden, severe onset of lower abdominal pain, followed by physical collapse. This severe onset of pain usually follows some excessive usage of

abdominal musculature, such as straining at stool, intercourse, or even sudden rising from bed in the morning. Although pain is not complained of in all cases, lack of such complaint certainly casts doubt on the diagnosis of an ectopic implantation.

Amenorrhea is the second most common finding in the clinical picture of ectopic pregnancy. The typical history elicited is the missing of a menstrual period, followed two to three weeks later by the onset of mild to moderate degrees of vaginal spotting. The spotting is then followed by any one of the previously described patterns of pelvic pain. Vaginal bleeding of ectopic pregnancy is usually, but not invariably, mild in comparison to that of abortion. It may become quite profuse subsequent to the death of the ectopic gestation and resultant loss of the decidual layer from the intrauterine cavity.

Physical Examination

Symptoms of abdominal peritoneal irritability may be elicited in some 90 per cent of all cases. Tenderness of the cervix, particularly when motion is directed away from the site of possible implantation, has been regarded as a valuable sign of ectopic gestation. It has also been noticed that any attempt to lift the cervix and the uterus into the false pelvis will elicit a marked pain response when ectopic pregnancy is a factor.

The usual signs and symptoms of pregnancy are also associated with ectopic implantation. Uterine enlargement and cervical softness are suggestive findings. When they are combined with history of nausea and vomiting, breast enlargement and tenderness, and increased urinary frequency, pregnancy must be considered, regardless of concern for the site of implantation of the embryo.

Laboratory Diagnosis

There is little return of a constant or positive value from laboratory determinations when an effort is made to establish the diagnosis of an ectopic implantation. Pregnancy tests will be positive in perhaps 50 per cent of all surgically proven ectopic gestations. Thus, positive pregnancy tests may well lend support to a considered diagnosis of ectopic implantation, but no reliance should be placed upon the return of a negative pregnancy test. Hematocrit and hemoglobin determinations and red cell counts are only of significance if repeated tests over a period of observation show a slow drop from the levels of initial laboratory determinations. The leukocyte count is of little value, since variations have been

recorded which range from an essentially normal count up to 30,000.

Diagnosis

A typical ectopic gestation, like typical appendicitis, is easily diagnosed. The ectopic pregnancy with vaguely positive symptoms and signs is as difficult to establish as is the diagnosis of appendicitis in a similar situation. Any physician dealing with women of child-bearing age must bear the condition in mind. A differential diagnosis should include consideration of rupture of a corpus luteum cyst, acute pelvic inflammatory disease, threatened or incomplete abortion, acute twisting of the pedicle of an existing ovarian cyst—and of course appendicitis.

Most important is examination of the cul-de-sac. The return of non-clotting blood from the cul-de-sac usually limits the diagnosis to ectopic pregnancy or ruptured corpus luteum cyst. Either condition may necessitate surgical intervention to define the bleeding site and stop the bleeding. Cul-de-sac investigation may be accomplished by needle insertion as an office procedure, or by culdoscopy or colpotomy as hospital techniques.

The incidence of correct preoperative diagnosis of ectopic pregnancy in the literature is slightly over 80 per cent. In the present series about 85 per cent of the surgically established ectopic implantations were correctly diagnosed preoperatively. In one-third of the cases the diagnosis was obvious. In the remainder, hospitalization was carried out and careful differential diagnosis made as to other possibilities before the diagnosis of ectopic pregnancy was established. In 15 per cent of the cases, the abdomen was opened with a primary incorrect diagnosis other than that of ectopic implantation. It is impossible to say how many cases of ectopic pregnancy were missed on the gynecologic service, since many considered cases improved under observation and the abdomen was never entered.

In any operation with a diagnosis of ectopic pregnancy as the main consideration, the major concern is to use as conservative a surgical technique as possible. Removal of the involved salpinx is usually the only surgical procedure that should be considered routine in this situation. In many instances, however, it is possible to conserve part or most of the involved tube, if future pregnancy is an important factor. Rarely is it necessary to sacrifice ovarian function on the involved side. Hemi-castration should not be the end result of an ectopic gestation.

When blood transfusion is nec-

essary, usually more than one unit (500 cc.) of whole blood is demanded by the shock and blood loss. In the present series some three-fourths of the patients who required a transfusion required more than one. Since the danger from transfusions is significantly greater than that from anesthesia, the mortality of ectopic pregnancy is fundamentally associated with clinical neglect due to an incorrect diagnosis, or from transfusion reactions from mismatched blood.

Summary

When the clinical diagnosis of ectopic pregnancy is not obvious, hospitalization with careful observation is immediately in order. Adequate cul-de-sac investigation will provide the most useful and reliable information. Surgery, if indicated, should be immediate but strongly conservative in character. Transfusion, if indicated, is usually necessary in multiple quantities.◀

Chronic Severe Idiopathic Hypercalcemia: Treatment with Thyroxin

An infant of 1 year exhibited severe idiopathic hypercalcemia. Signs and symptoms were anorexia, vomiting, failure to thrive from birth, constipation intermitting with attacks of diarrhea and dehydration, retardation of physical and mental development, marked muscular hypotonia, characteristic facies (large ears, flat nose bridge, small head, and receding mandible), convergence strabismus, hypertension, and a low systolic murmur. Biochemical findings were persistent hypercalcemia, hypercholesteremia, and impaired renal function. X-rays revealed hypercalcification of bones. The first symptoms were noted soon after birth and before taking vitaminized milk and doses of vitamin D. First vitamin D (600,000 units) was given at 6 months, this causing increase of symptoms and loss of weight. Treatment with 1 mg. thyroxin (every second day) after one month, then 1 mg. every day, resulted in improvement. Improvement was probably not due to restoration of thyroid hypofunction, but to increased excretion of calcium in urine and feces. Thyroxin may have a direct effect on the vitamin D activity of the serum.

Hooft, C., & Vermassen, A., *Acta paediat. belg.*, 13:57-74,1959.

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original article

Treatment of Obese Diabetics and Arteriosclerotics

ARTHUR BERNSTEIN, M.D., F.A.C.P.,* and
FRANKLIN SIMON, M.D.,† *Newark, New Jersey*

►*Administration of a drug combining several amphetamines aided weight reduction in 100 patients. An effective program was maintained only when a patient was sufficiently motivated to restrict caloric intake, however. Greater weight losses were recorded in the first eight weeks than in succeeding weeks.*◄

A decrease in life expectancy may be correlated with the degree of obesity within certain limits.[1,2] This threat to survival affects young adults as well as older persons. Human experience in this respect is borne out by experimental studies on animals in which it was found that rats restricted in caloric intake but consuming an otherwise adequate diet, lived longer and retained their youthful appearance and vigor longer than rats allowed to fatten at will.[3]

It is suggested that the development of atherosclerosis is related to alterations in the plasma content of various lipids, and that similar abnormalities are factors in the etiology of obesity. The suspicion is great that atheroma formation is encouraged by the same mechanism that produces fat formation.

"We dig early graves with our forks" as well as many other aphorisms seemingly have lost their force in an environment of over exposure. So much has been written regarding the necessity of weight reduction that the advice of the physician now often falls on deaf ears. Even those who have already reaped the harvest of cardiovascular disaster soon lose the drive required for a successful, proper weight

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†Assistant attending physician, Beth Israel Hospital, Newark.

1. Dublin, L. I., & Marks, H. H., *Bull. Metropolitan Life Ins. Co.*, 10:32,1951.
2. Dublin, L. I., Nutrition Symposium Series, New York, The National Vitamin Found., Inc., 6:106,1953.
3. McCay, C. M., *J. Am. Dietet. Assn.*, 17: 540,1941.

reduction.

Studies of insurees who have dieted to normal after being uprated for obesity show that the life expectancy is returned toward normal. Further, many reports have been made of the decreased occurrence of deaths due to degenerative vascular disease in countries during periods of relative famine, with rebounds in their incidence when calorie intake is again high. There is also necropsy evidence of reversibility of atheromatous lesions in people who have lost considerable weight before death.[4] All of which should stimulate the drive to weight reduction.

Many early, mild, obese diabetics, whose weight is returned to normal, no longer demonstrate any impairment of carbohydrate metabolism even after careful glucose tolerance tests.[5] Other diabetics note an almost universal reduction in insulin requirements. However, 16 of 19 (84%) who had attained a normal glucose tolerance test after weight loss still showed an abnormal response to a cortisone-modified glucose tolerance test. The remaining three showed a normal carbohydrate tolerance on the standard test and on the cortisone-glucose tolerance test.[6]

Efforts to incriminate the endocrines, lipophilia, or hypoglycemia as culprits in adiposity have not been wasted, for they have cleared the field for the acceptance of the doctrine that obesity is invariably caused by an intake of usable calories in excess of the outflow, and that this disproportion is brought about by excessive eating with or without an appetite. One person suddenly faced by danger will run from it; the next will attack it. Physical fatigue causes an insistent desire for food in some persons; others, fatigued, are repelled by food. Physical, social, intellectual, and sexual failures frequently call forth indulgence in food and make the problem of weight reduction increasingly difficult.

One would assume that patients with a serious illness such as diabetes mellitus, coronary heart disease, hypertension, etc. would be easy to induce to eat less. This is true of many; but not a few eat more under these circumstances, and some who start off well quickly rebel. Obviously, if overeating represents a neurotic adjustment, the answer is to cure the neurosis—an impossibility with a large number. Support, reassurance, and interpretation of the patient's problems serve better than scolding, but our experiences even along these lines have been dis-

4. Wilens, S. I., *Am. J. Path.*, 23:773,1947.
5. Newburgh, L. H., & Conn. J. W., *J.A.M.A.*, 112:7,1939.
6. Conn, J. M., *Diabetes*, 7:347,1958.

appointing. The psychologic approach seems to be a very poor best.

How much can be accomplished by muscular work? A 250 pound man can climb a flight of stairs at the expense of three calories. If he is a good walker, he may dissipate 100 calories per horizontal mile. Omission of an ounce of cream will reduce the inflow the same number of calories. Since adipose tissue yields eight calories per gram, the mile walk will reduce the patient's weight only 12.5 grams. He must walk 36 miles to rid himself of one pound of fat —how disappointing and in the cardiac often impossible to achieve.

Diet is the only practical answer. Most success comes from limiting the calories sharply. Strang and McClugage[7] have shown that obese patients subsisting on 450 calories daily were always in nitrogen balance when the diet contained 60 grams of protein. Moderate restriction has not been successful. The methods are many—bulk laxative, fad diets with monotonous repetitious meals, frequent small low-calorie meals; low-fat, low-carbohydrate, low- or high-protein diets and all modifications have been tried.

We too have exposed our patients to one or another of the methods with very variable results. Many of these diets are too restrictive and can result in nutritional deficiencies. The optimal method of reducing food intake is to limit the appetite. The calories are reduced, yet the diet as a whole may be satisfactory from a psychologic and nutritional standpoint. The anorexigenic drugs are valuable aids in achieving this state and so are important in the successful treatment of obesity.

Material and Methods

We are reporting in this paper the data obtained during a one year study of 100 patients who were seen for varying periods of time. All were overweight: 56 had cardiovascular disease, with or without diabetes; four had diabetes alone; 40 had no disease other than obesity. Of the 16 diabetics, 11 had associated arteriosclerotic cardiovascular disease: five of these 11 and one of the remaining had associated hypertension.

Of the 39 with arteriosclerotic cardiovascular disease, six had diabetes, 10 had hypertension, and five had both diabetes and hypertension. Of the 24 hypertensives, one had diabetes, 10 had arteriosclerotic cardiovascular disease, and five (as noted) had both diabetes and arterios-

7. Strang, J. M., & McClugage, H. B., *J. Clin. Invest.*, 6:277,1928.

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clerotic disease. The patients (57 men, 43 women) ranged in age from 18 to 67 years.

Seen at intervals of one to two weeks, all of the patients were weighed, blood pressure taken, pulse rates noted, and subjective observations recorded. No special chemical studies were done except those required for the treatment of their underlying disease. Indicated medications were continued and varied as their needs required.

The agent used in this study was a drug combination* consisting of methamphetamine hydrochloride, *d*-amphetamine sulfate, *dl*-amphetamine sulfate and methamphetamine saccharate.

The usual procedure was to give 20 mg. about 10 a.m. and 10 mg. 30 minutes before the evening meal, in order to best control the periods of greatest food demand, and at the same time achieve the greatest psychologic and pharmacologic value of the therapy. The dosage and time were altered to suit the individual requirements. Some of these patients felt early mild stimulation but this disappeared in most with continuation of the same dosage; rarely was it necessary to decrease the dose.

An attempt was made to use a placebo tablet identical in appearance in a group of 25 patients at the end of the fourth week of therapy, but there was universal rebellion to the substitution.

In the diabetic patients, their usual diets were continued, and hypoglycemic agents, parenteral or oral, were prescribed as required. In the non-diabetics, a standard 1000-calorie diet containing 60 Gm. protein was prescribed. All patients were given an oral vitamin supplement.

Results

As anticipated, the total weight loss was less than should have been achieved on the diet prescribed for these 100 patients. However, the loss was in excess of 1200 pounds for the group for the first eight weeks. The average of almost 13 pounds per patient includes some who lost almost nothing and some who lost in excess of 25 pounds. After this period of two months, the incidence of case delinquents became increasingly greater so that a further appraisal of weight reduction could not be included.

Sixty-two were still under observation at the end of the twelfth week; 46 at the completion of the sixteenth week; and 34 at the twentieth week. The patients followed from the ninth to the twentieth week lost an additional 556 pounds. In a total of 1378 patient-weeks, a weight re-

*Obetrol™, Obetrol Pharmaceuticals Division of Rexar Pharmacal Corporation, Brooklyn, New York.

duction of 1846 pounds was noted, or 1⅓ pounds per week per patient. Twelve of the diabetics successful in weight reduction had improvement in carbohydrate tolerance. Those using hypoglycemic agents were able to lower the dosage and in two cases these agents were discontinued. In no case was the carbohydrate tolerance diminished by the anorectic agent.

We were initially concerned with the potential danger of increased blood pressure and increased cardiac work in those with coronary insufficiency. In none of these was there an increase in angina or elevation of blood pressure. In four of the hypertensive patients, all hypotensive agents were discontinued after adequate weight loss; three of these required reinstitution of hypotensive therapy when they broke their diet and weight gain recurred. In many cases with adequate weight loss, there was a definite decrease in evidence of coronary insufficiency with an increased work tolerance and decreased demand for nitroglycerin.

In this group of 100 patients, there were 30 who had not been able to take the previously available amphetamines in sufficient dosage to maintain an anorectic effect without untoward excitement and insomnia. Twenty-six of these were able to take the amphetamine complex used in this study with adequate anorectic effect and with no significant side effects.

Discussion

The expected complete cooperation by the cardiovascular group, who should have the greatest motivation for weight reduction, was not forthcoming. The "just heavy" group was somewhat superior and it is easier to understand this if we remember that this group was made up in large part of younger, healthy men and women who had decided for aesthetic reasons to lose weight.

The impossibility of keeping a large group of patients intact for a study of this kind was well demonstrated. The common bond was a desire for weight reduction in the overweight—not a sufficient bond to maintain prolonged adherence.

A successful program in the individual himself is the only motivation strong enough to ensure continued participation in the study. Those who lose weight continue the weight loss and continue the project. The less successful rapidly fall by the wayside.

The use of amphetamine agents as a means of curbing the appetite and increasing effective

cooperation with weight reducing diets is well known.[8] Their usefulness in the diabetic, once criticized because of probable hyperglycemic reaction, is now generally accepted. The improvement in carbohydrate tolerance noted in our group confirms the findings of others.[9]

In our own study with the anorectic amphetamine agent used here, we tried to learn the effect on vasculature, blood pressure and cerebrum, as well as appetite. A third of the group had been unable to take other amphetamine drugs because of insomnia, restlessness, tachycardia, and increased irritability. Only four demonstrated this type of intolerance to the amphetamine complex used, although several others found it necessary to reduce the dosage to avoid these symptoms. The anorectic effect was maintained in this group employing the lower dosage.

From a study of these patients, it becomes apparent that by manipulation of the amphetamine chemistry, one can maintain effective anorectic activity with a minimal number of untoward side effects.

Summary

In 100 patients, of whom 60 had diabetes, arteriosclerosis, hypertension, or a combination thereof, weight reduction was achieved using a combination of amphetamines and diet.

Those diabetics who had an adequate weight reduction had increase in carbohydrate tolerance. Hypertensives responded with lowering of the blood pressure and many arteriosclerotics with coronary insufficiency demonstrated marked improvement. With a daily divided dosage of 30 mg. of this amphetamine complex, appetite was depressed without nervous restlessness or insomnia in 26 patients who previously had been unable to use other amphetamines in any effective dosage. All patients had appetite depression while on this drug, but only those with adequate motivation adhered to a proper dietary intake. This demonstrates again that the obese patient eats not only because of hunger or physical demand but also to meet a psychologic need which is rarely affected by medication alone. No attempt was made to determine what proportion of our group was successful in weight reduction because of the marked variance in the rate of weight reduction. Return to optimal weight level was effected in some, and in others a continued but discouragingly slow loss of weight occurred.

8. Nathanson, M. H., *J.A.M.A.*, 108:528,1937.
9. Osserman, K. E., & Dolger, H., *Ann. Int. Med.*, 34:72,1951.

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*Gamble, C. J.: Am. Pract. & Digest. Treat. *11*:852 (Oct.) 1960.

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In a study such as this with its limited periods of observation, results cannot be divided into successful or unsuccessful groups since most lost weight in one period, only to gain weight in another. Reinstitution of weight loss with a return of interest or motivation was frequently observed. Cooperative patients lost weight progressively, but starts and stops were the rule.

In the cooperative patient, the anorectic amphetamine compound was markedly beneficial in producing the desirable weight loss with minimal side effects, even in those with cardiovascular and other chronic ailments which usually make use of other amphetamines undesirable because of side effects.◀

Glaucoma Therapy: Long-Term Results

Results of medical and surgical treatment applied at various stages of glaucoma (probably mostly open-angle) are illustrated in 20 cases, treatment having been surgical in 13 (including 3 cases of pseudoglaucoma), medical in 4, and medical following unsuccessful operation in 3. It is concluded that:

1. The ophthalmoscopic appearance of the optic disk may be an important guide in management, denoting how much tension can be tolerated without loss of function.

2. Eyes with marked cupping of the disk and considerable field loss require a tension below the average normal to prevent further loss of function.

3. Eyes with a normal disk and no field loss withstand increased pressure well and may show no loss of function over many years.

4. If operation is successful in reducing tension to a safe level the chance of preventing further loss of function is excellent, whatever the stage of the disease.

5. Operation seems justified for some patients showing progressive field loss, the lowering of tension effected by successful surgical treatment appearing to have an arresting effect on this process in cases of pseudoglaucoma.

6. Tension studies are valuable in medical management of glaucoma as a quick method for judging the effectiveness of therapy.

Chandler, P. A., *Am. J. Ophth.*, 49:221-246, 1960.

e e l e e c e d o n l r f r f l o s e t c .

Otorhinolaryngologic Infections Treated with Oral Penicillin (Phenethicillin)

ARMAND A. JACQUES, M.D.,* and
VAL H. FUCHS, M.D.,† *New Orleans, Louisiana*

►*Of 50 patients treated for a variety of otorhinolaryngologic bacterial infections, 90 per cent had satisfactory results (patient became afebrile and otherwise asymptomatic within a week). Dosage was 250 mg. three times daily for three days, increased to 2 Gm. three times daily for the final five days.*◄

Among the qualities desirable in a new penicillin are increased effectiveness by the oral route, activity against gram negative organisms, less allergenicity, and greater effectiveness against pathogens (such as staphylococci) which develop resistance. The isolation and characterization of 6-amino-penicillanic acid[1] provided an approach for the synthesis of new penicillins. It is now possible to attach side chains to the central nucleus and thereby change several properties of the drug. Important among these are the antibacterial activity *in vitro*, serum binding, CD_{50} (median curative dose), resistance to stomach acid, and efficient intestinal absorption.

Potassium (K) phenethicillin†† represents the combination of the alpha phenoxyethyl radical with the 6-amino-penicillanic acid nucleus. This has resulted in a penicillin stable in stomach acid. Blood and urine concentrations of K phenethicillin indicate that absorption from the alimentary tract is much greater than with penicillin G and twice that of penicillin V in the first hour.[2] The serum protein affinity of K phenethicillin is about equal to that of penicillin V.[3]

Certainly as many as four in-

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1. Batchelor, F. R., et al., *Nature*, 183:257, 1959.

††*Maxipen*®, J. B. Roerig & Company, New York, New York.

2. Morigi, E. M. E., et al., Antibiotics Annual, 1960, p. 127.
3. Pindell, M. H., et al., Antibiotics Annual, 1960, p. 111.

vestigators[4-7] have reported that they obtained satisfactory results with oral phenethicillin in various mild-to-moderately severe dermatologic, soft-tissue, and respiratory bacterial infections due to penicillin-susceptible pathogens. Gold[7] includes reports of satisfactory results in subacute bacterial endocarditis. The incidence of allergic reactions reported by all authors, as with other oral forms of penicillin, appears to be less than that encountered with intramuscular penicillin,[8] but the need for the usual precautions is still emphasized.

The present paper concerns itself with a clinical trial of potassium phenethicillin in a variety of otorhinolaryngologic infections treated in hospitalized and clinic outpatients.

Methods and Materials

Fifty patients (25 of each sex), seven months to 53 years of age, were included in the trial. Duration of therapy with phenethicillin was from five to 14 days, the majority a 7-day period. Several required some hospitalization, but the majority were seen as outpatients.

4. Osment, L. S., *Clin. Med.*, 7:523,1960.
5. Carter, C. H., *J. Florida G.P.*, July, 1960.
6. Shubin, H.: Oral Penicillin (Potassium Phenethicillin) in General Infections (to be published).
7. Gold, J. A.: Oral Phenoxyethyl Penicillin (Maxipen) in the Management of Moderate and Severe Infections (to be published).
8. Welch, H., et al., Antibiotics Annual, 1958, p. 296.

Multiple infections appeared in a few patients. There were 62 occurrences of various otorhinolaryngologic bacterial infections (see Table 1). Pathogens were isolated and identified from cultures in all cases. Isolates seen were Staph. aureus, Pneumococcus, beta-hemolytic streptococcus, enterococcus, and Neis. catarrhalis. Susceptibility testing by the disc method was done with penicillin, streptomycin, tetracycline, erythromycin, oleandomycin, novobiocin, chloramphenicol, and sulfonamides. Low and medium-concentration discs were used in testing, i.e., 2 and 10 mcg./ml. discs. If an organism was susceptible to both discs, it was termed susceptible; if resistant to the low but susceptible to the medium concentration, it was moderately susceptible; if the isolate was resistant to both the 2- and 10-mcg./ml. discs, it was judged resistant. Discs of higher concentrations are usually reserved for use in testing isolates of urinary tract infections where very high levels may be feasible clinically.

Dosages of phenethicillin were given in accordance with the type and severity of the infection. Two dosage forms — tablets and oral solution — were used. Phenethicillin, 125 mg. three or four times daily, was given to 13 patients; 250 mg. three or four

TABLE 1

KINDS OF OTORHINOLARYNGOLOGIC INFECTIONS* TREATED WITH *MAXIPEN*

Otitis media		Cervical adenitis	4
acute, suppurative	3	Nasopharyngitis	4
with nipple performation	1	acute, bilateral	2
chronic, with perforated eardrum	2	Pharyngitis	
acute, bilateral	3	diffuse	1
serous	1	acute	1
chronic	1	Laryngitis	
Tonsillitis		Bronchitis	1
acute, follicular	6	acute, laryngo-tracheo	1
acute, membranous, with cervical adenitis	1	Adenoiditis	
acute	2	acute	1
acute with URI	1	Ethmoiditis	
Mastoiditis		purulent	1
chronic	4	Abscess	
with deviated septum	1	peritonsillar (quinsy)	3
acute	1	dental	2
postfenestration	1	nose, dorsum (post-traumatic)	1
Sinusitis		Impetigo	
parasinusitis	2	nares and mouth	1
right, maxillary	2	Erysipelas	1
bilateral, maxillary	1	Cellulitis	1
right frontal	1	Furunculosis	
Rhinitis		severe	1
purulent	4	Cyst (thyroglossal)	
		acute infection	1
		Ludwig's angina	1
		TOTAL	62

*Multiple in some instances.

times daily, to 27 patients; and 500 mg. three or four times daily to nine patients. The highest dosage given was 6 Gm. daily, for five days.

Prior antibiotic and sulfonamide therapy had been utilized without success or with slow, equivocal results, in some cases. These antimicrobials were sulfamethoxypyridazine, chloramphenicol, demethylchlortetracycline, sulfadimethoxine, furaltadone, oxytetracycline, and penicillin - dihydrostreptomycin. Procaine penicillin had also been given parenterally to one patient.

Appropriate supportive therapy was required in most cases. Other drugs given and steps taken included analgesics, gargles, vasoconstrictors, antimicrobial nose drops, antihistamines, Burow's solution, intravenous fluids, hydrogen peroxide drops, enzyme preparations, hot soaks, nasal sprays, nasal packs, my-

ringotomies, antral irrigations, incisions with drainage, laryngoscopies, and crushing and infracturing of the middle turbinate. All patients were carefully followed with temperature determinations and observed for response to treatment or for possible allergic reaction to phenethicillin.

Results

Response was judged excellent if the patient became afebrile and otherwise asymptomatic within a week. Where this did not occur, the drug was considered a failure, though some degree of improvement might be seen.

Excellent results were achieved in 45 patients (90 per cent), failures were seen in five (10 per cent). Toleration to phenethicillin was particularly good in this selected series of patients. No notable side effects were encountered. A non-threatening reaction occurred in one patient who had had intramuscular penicillin on various prior occasions without mishap. Originally, this patient had taken another antibiotic for five days, following an open reduction of a nasal fracture necessitating packs, and two days later and after removal of the packs, an abscess became evident on the dorsum of the nose. Phenethicillin therapy was initiated, and after three days giant urticaria began to develop on arms, hands, knees, and scalp. Because the abscess was healing well, phenethicillin was continued for a fourth day. Antihistamines were then given to curb the pruritus, following which, within a week, remission of hives occurred and control of the abscess continued. Some question arose as to whether the urticaria was caused by the penicillin, but this was never resolved.

Among the five therapeutic failures were three cases in which the isolate was shown to be resistant to penicillin *in vitro*. These were instances of ear infection—two due to strains of Staph. aureus and the third to Enterococcus. The remaining two clinical failures were also in infections of the ear due to Staph. aureus, but the pathogens were seen to be of medium susceptibility *in vitro*, notwithstanding the failure clinically.

On the other hand, among the 45 successfully treated cases was one of furunculosis due to a strain of Staph. aureus which appeared penicillin-resistant in disc-testing; the infection was brought under excellent clinical control after eight days of treatment. Dosages used were 250 mg. three times daily for three days, increased to 2 Gm. three

times daily for the final five days.

Aside from the cited three discrepancies between *in vitro* and *in vivo* observations, there was high correlation between laboratory and clinical results. Among the 45 patients treated successfully, all but the one noted above yielded isolates either susceptible or moderately susceptible to penicillin. Correlation between the procedures followed and clinical results obtained underscore the necessity for using discs of sufficiently high concentration to effectively test the susceptibility of the isolate to penicillin.

Conclusion

Phenethicillin appears to bring to penicillin therapy the many advantages of the oral route, without sacrificing the consistently dependable results formerly obtainable only with injectable forms. Peak levels of oral phenethicillin attained in the blood and tissue offer the clinician predictably favorable outcomes, as seen by 90 per cent satisfactory results in the series of 50 patients treated. As has been the case on other occasions, phenethicillin renders obsolete older forms of oral penicillins, becoming almost the drug of mandatory choice in mild to moderately severe penicillin-susceptible infections, until such time as an even better oral penicillin becomes available.◀

Latin Square Study of Infant Feeding

The Latin square crossover technique is a method of trial in which the number of patients equals the number of treatments. In this study, 4 infant formulas were fed to 56 infants over a period of 8 weeks. A square refers to a set of 4 infants, each of whom was fed 4 formulas in 4 different periods. In a control group, 32 infants were fed only one of the 4 formulas for 8 weeks.

By using the Latin square, many otherwise uncontrollable factors were neutralized and significant variations detected by statistical analyses. During the first 2 weeks after birth, all babies gained at a significantly slower rate than in following weeks. There was no significant difference in weight gain with any one of the formulas. No ill effects related to change of formulas (at intervals of 2 weeks) were noted. The various formulas were probably responsible for the significant differences in stool consistency and frequency.

Brown, G. W., et al., *J. Pediat.*, 56:391-398, 1960.

clinical report

Chlordiazepoxide in Cardiovascular Disease

IRVING HIRSHLEIFER, M.D.,* SAMUEL DRAGO, M.D.,† and RAMNATH NAYAK, M.D.,‡ *Brooklyn, New York*

►*This drug was found to be an effective adjunctive therapy in a variety of disorders, including angina pectoris, head noise, shoulder-hand syndrome, intermittent claudication, cardiac arrhythmias, and cardiac decompensation. Both morbidity and mortality in cardiac disease may be decreased with this drug.*◄

The clinical application of chlordiazepoxide§ to the treatment of cardiovascular disorders ranging from angina pectoris to head noises has been expanded since the first report.[1] An increased number and variety of cases have been observed for longer periods and the clinical pharmacologic effects further elucidated.

Material and Methods

Chlordiazepoxide (Librium) was administered to 43 patients suffering with angina pectoris, 17 with head noises, eight with varying degrees of cardiac decompensation, five with intermittent claudication, five with cardiac arrhythmias, and three with typical postmyocardial infarction shoulder-hand syndrome. Electrocardiographic (ECG) evidence of myocardial disease was shown in the resting state in 39 of those in the angina pectoris group; two exhibited abnormalities following the Master two-step test, and in two the angina was on the basis of rheumatic valvular disease. Fifteen of the 17 patients with head noises were in the sixth to eighth decades of life and gave a history of arteriosclerotic disease; the remaining two were in their middle 40s with no evidence of vascular disorders. The three shoulder-hand syndromes followed acute myocardial infarctions and were all of less than one year's duration. All five patients with intermittent claud-

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§*Librium*®, Roche Laboratories, Nutley, New Jersey.
1. Hirshleifer, I., *Cur. Therap. Res.*, 2:501-508,1960.

ication had demonstrable arteriosclerosis. Of the cardiac arrhythmias group, three had paroxysmal atrial fibrillation with no evidence of organic heart disease, one had rheumatic valvular disease, and one rheumatic pericarditis. Those given the drug for cardiac decompensation were: two with rheumatic valvular disease, one with rheumatic pericarditis, and five with arteriosclerotic heart disease, four of whom were in the acute phase of myocardial infarction.

None of the patients in the anginal group had experienced complete relief of symptoms while observed for periods of one month to 10 years. Therapeutic measures had varied from long-acting nitrites (proven and purported), monoamine oxidase inhibitors, meprobamate, and phenothiazine, to internal mammary artery ligation and thyroid ablation. The only anti-anginal preparation continued as routine in the regimen of some of these patients once the investigation began was erythrol tetranitrate (Cardilate). In some patients even this proven longer-acting vasodilator[2] was later discontinued. Cardiac glycosides, antihypertensives, diuretics, and non-cardiac medication such as the oral hypoglycemic drugs, thyroid analogs, and hypocholesterolemic agents was continued without interruption. The anginal patients were given no advice concerning nitroglycerin which was continued on a p.r.n. basis. The introduction of chlordiazepoxide into the regimen of these subjects was made without indicating any action other than a possible tranquilizing one. Most of our patients had been subjects of investigative studies on many other occasions and accepted an additional medication as a matter of course.

Chlordiazepoxide in dosages of 5 mg. three times daily to 25 mg. four times daily was administered to these patients for periods ranging from 10 days to six months. In many, the regimen was interrupted at periodic intervals to ascertain the patient's current status.

Results

A total of 81 patients was treated (Table 1). Patients were considered to have complete relief if the symptoms of their disorder disappeared and no further restriction on their activity was imposed. Almost complete was a degree of relief for those whose activities remained the same or increased, with at least a 50 per cent decrease in symptoms and/or a questionable decrease in physical activities dur-

2. Hirshleifer, I., *Am. J. Cardiol.*, 5:66-71, 1960.

TABLE 1

RESULTS IN PATIENTS TREATED WITH *LIBRIUM**

DEGREE OF SYMPTOM RELIEF	A	B	C	D	E	F
Complete	28	11	3	3	2	5
Almost complete	10	5	0	1	1	2
Doubtful	4	1	0	0	0	0
None	1	0	0	1	2	1
Aggravated	0	0	0	0	0	0
TOTAL	43	17	3	5	5	8

*Key to symbols: A=Angina pectoris; B=Head noise; C=Shoulder-hand syndrome; D=Intermittent claudication; E=Cardiac arrhythmias; and F=Cardiac decompensation.

ing the drug period. 'None' and 'aggravated' are self-explanatory.

Twenty-eight of the 43 patients treated for angina pectoris were completely relieved. Nitroglycerin was dispensed with and activities were increased. In three cases erythrol tetranitrate had to be continued to maintain this result; in three others this drug was continued in half dosage, because of the belief that a long-acting vasodilator is a valuable adjunct in the treatment of coronary insufficiency. The 10 patients having almost complete relief increased their activities, many their tobacco consumption, and all experienced less than 50 per cent of their anginal episodes. Four patients having doubtful results may have been helped by the medication, but were not entered in the higher category mainly because of the difficulties involved in making the estimations. All experienced fewer anginal episodes and took less nitroglycerin. The one patient with no discernible improvement was a physician's mother who had a recent myocardial infarction and became addicted to narcotics.

There were no deaths and two instances of myocardial infarction in the course of this investigation. The first was a hack driver, 63, who had had three myocardial infarctions, each hospitalizing him for a minimum of four weeks. He suffered increasingly with angina pectoris, head noises, and intermittent claudication. He was intolerant to nitroglycerin and erythrol tetranitrate, was unaffected by pentaerythritol tetranitrate. All symptoms were alleviated by chlordiazepoxide, 10 mg. three times daily. Four days after reducing dosage to twice daily due to drowsiness, a subendocardial

focal infarction was experienced, verified by SGO transaminase and ECG determinations. He was confined to his home except for visits to the investigator's office three times a week. Dosage was increased to 10 mg. four times daily and the patient returned to work 12 days following this cardiac attack. Two months later he remained on his job with no angina, head noises, claudication, or drowsiness. He has increased his smoking four-fold.

The other patient was an executive of 58 involved in the gray market in steel. Despite a severe hypertension and increasing frequency of anginal episodes, he continued to increase his business activities. Chlordiazepoxide decreased the anginal episodes, but as his symptoms diminished his activities increased inordinately. He finally experienced a myocardial infarct. Last reports were that he was attempting to carry on business activities from his hospital room.

Chlordiazepoxide is the first drug our investigation revealed which seems to relieve head noise. This was completely volunteered news in most of the 17 patients who were being treated for other cardiovascular symptoms. The shoulder-hand syndrome following myocardial infarction was alleviated in the three patients treated with this drug. Definite improvement was noted in four cases of intermittent claudication, but the fifth subject experienced severe drowsiness and loss of balance. This patient was treated following unsuccessful vascular surgical intervention.

Complete relief and prevention of paroxysmal atrial fibrillation were noted in two patients in whom no cardiovascular disease was discernible. There was improvement in one with rheumatic valvular disease complicated by similar paroxysms. No ECG improvement was noted in one patient with paroxysmal atrial tachycardia with no evidence of organic heart disease. This person responded to digitalization later. Another patient with atrial tachycardia and an underlying rheumatic pericarditis, while not showing ECG response was much calmer following the administration of the drug.

Effects of the adjunctive use of chlordiazepoxide in cases of cardiac decompensation have been striking. The basic regimen was unchanged, but the addition of this drug alleviated all symptoms in one patient with chronic rheumatic valvular disease, and four others who were being treated for acute myocardial infarction. One person with

rheumatic valvular disease and another with hypertensive cardiovascular disease were much improved. One with rheumatic pericarditis became much calmer, but objective evidence of decompensation remained unchanged. Relief of fear and anxiety made these patients much more amenable to treatment and was thought to hasten recovery.

A man of 55 was admitted with a severe substernal chest pain of two hours' duration, ECG on admission revealing acute anterior-wall infarction. Heparin and coumadin were given as anticoagulants and morphine to relieve pain. Pain, not severe, persisted for two days and narcotics were required every six hours. On the third hospital day, the patient became hypotensive and developed congestive heart failure. An intravenous infusion of 5 per cent dextrose and water with 100 mg. of Aramine was given and the patient was digitalized. Due to the patient's anxiety and fear he was placed on chlordiazepoxide, 10 mg. four times daily. By the fifth hospital day he was free from fear, anxiety, and chest pain. On the seventh day the drug was discontinued, the chest pain returned and no relief was obtained by use of a placebo. Chlordiazepoxide therapy on the eighth day resulted in a complete remission of symptoms.

Dosage and Side Effects

Chlordiazepoxide, 10 mg. four times daily, was used in the majority of cases; some did well on, or could not tolerate, more than 5 mg. three times daily and others needed 25 mg. four times daily. The dosage may have to be increased because of greater activity and tobacco consumption.

Side effects experienced were mild drowsiness and loss of balance. Repeated blood counts, serum cholesterol, thymol turbidity, and urine tests did not show any significant changes. The drowsiness interfered little with work performance, mental or physical. Apparently the tensions, fears, and anxieties that usually keep these patients awake when the day's activities are done vanish and somnolence is the natural consequence.

Loss of balance was noted in only five of 80 persons under investigation, and in two of these it was partially relieved upon decreasing the dosage. If milder degrees of imbalance and gait disturbance are included under this untoward reaction to the drug the incidence rises to 12 per cent. In two patients the reaction appeared only after several days of drug therapy.

The appetite stimulation by the drug may be a problem if one is striving for weight reduction. Mild constipation was a complaint in 15 per cent of these patients, and about half that number stated that while libido was diminished performance was normal. Menorrhagia was initiated in two female subjects. There appeared to be no contraindications to the use of the cardiac glycosides, anti-hypertensives (hydralazine, ganglionic blocking agents, reserpine, guanethidine) and a wide variety of diuretic agents that were used in conjunction with the drug during this study.

Conclusions

1. Chlordiazepoxide (Librium) has been found to be effective as adjunctive therapy in a variety of disorders, including angina pectoris, head noise, shoulder-hand syndrome, intermittent claudication, cardiac arrhythmias, and cardiac decompensation.

2. Extensive pharmacologic and clinical studies indicate a wide margin of safety for this drug.

3. Its effectiveness results chiefly from its potent anti-anxiety pharmacologic properties.

4. There are indications that both morbidity and mortality in cardiac disease may be decreased with this type of drug. A larger and more strictly controlled investigation is suggested.◀

Ingrowing Toenail Treated with Shield Made by Splitting a Plastic Tube

Excision of the entire nail or the offending lateral part has been the only radical form of treatment; cosmetic results were often not good. A better method is to apply 2-cm. length of plastic (polyvinyl or polyethylene) material to keep the sharp edge of the nail away from the adjacent skin. The tubing is split longitudinally so that the U-shaped piece encloses the lateral edge of the nail. Pain is relieved immediately and the patient can walk directly after his toe has been given a dry dressing (no ointment). The wound heals in 6 to 10 days. The patient is directed in the future to cut his big toenails concave instead of convex. No relapses occur if well-fitting shoes are worn. *(Original in German)*

Korner, W., *Deutsche Gesundheitswesen*, 14: 2278-2279,1960 .

clinical report

Antipyretic-Antispasmodic Therapy in Pediatrics

MORTEN B. ANDELMAN, M.D., *Chicago, Illinois*

►*A combination of pipenzolate methylbromide, phenobarbital, and acetaminophen in liquid drop form was administered to 41 pediatric patients aged three months to 10 years. All had temperatures of 100.8 to 103.8°F rectally on initial examination. The average drop in temperature after three hours was 1.5°F.*◄

Administering aspirin to infants and children has long presented difficulties, many of them referable to the disagreeable taste and the relative insolubility of the drug. Flavoring the aspirin has all but solved the taste problem, but has created a potential hazard. More than 20 per cent of all aspirin poisonings reported are due to "candied aspirin" left within easy reach.[1]

With the advent of the liquid aspirins, both the taste problem and toxicity danger have been minimized. Nevertheless, the liquid aspirins now available do not provide ideal symptomatic relief and fall short of satisfying the precise needs of those physicians who treat large numbers of infants and children with febrile infections.

Infants and young children with mild infections are prone to elevated temperatures with the chance of febrile convulsions. These infants and children exhibit symptoms of irritability, abdominal discomfort, vomiting and loose stools. It is not uncommon for the physician to leave two, three, or even four separate prescriptions for the relief of the symptoms that accompany febrile infections. This creates a problem for parents who must administer a number of different medications at close intervals.

The ideal medication would be a palatable and safe preparation to replace aspirin with its danger of accidental poisoning, and at the same time relieve the irritability and gastrointestinal complaints, and minimize the

1. Christian, J. R., & Mack, R. B., *Illinois M. J.*, 113:149,1958.

danger of febrile convulsion. A preparation, in liquid drop form, containing an antipyretic in combination with a spasmolytic agent and a small concentration of a barbiturate was recently developed.* The contents are acetaminophen, long in use as an analgesic and antipyretic, with a minimum of toxicity; pipenzolate methylbromide, a post-ganglionic parasympathetic inhibitor, widely used as a smooth muscle relaxant for the GI tract in infants and adults[2-5]; and phenobarbital to decrease the irritability and lessen the danger of febrile convulsions. Phenobarbital in combination with pipenzolate methylbromide has the effect of decreasing the gastrointestinal hyperperistalsis which is commonly found in these infants and children. The small amount of phenobarbital also acts as a tranquilizer without producing sedation.

Material and Methods

Forty-one infants and children selected at random from private practice were treated with this preparation. All children under two years received 0.6 cc., those over two years 1.2 cc., of the drug every four hours throughout the 24-hour period.

Of the 41 patients, 14 were under, 27 over, two years of age (range: three months to 10 years). On initial examination, temperatures ranged from 100.8 to 103.8°F., rectally. The diagnoses were as follows: pharyngitis, 18 cases; gastroenteritis (fever, vomiting, and diarrhea), eight cases; follicular tonsillitis, one case; pneumonitis, one case; gastritis (fever, abdominal pain, and vomiting), two cases; upper respiratory infection (with cough), seven cases; and enteritis (fever and diarrhea), one case. Since all of these patients were seen at home and had infections, an antibiotic was used in conjunction with the preparation. The mothers were requested to report the child's temperature at the end of a three-hour period. The patients were maintained on the product until the temperature was normal (99.6° rectally) for a 48-hour period, and all symptoms had vanished.

Results

The average drop in temperature observed at the end of the 3-hour period was 1.5°. In every instance except three, the product was well accepted by the patient. In the three exceptions,

**Pediatric Piptal® Antipyretic*, Lakeside Laboratories, Inc., Milwaukee, Wisconsin. Each 0.6 cc. contains 2 mg. Piptal (pipenzolate methylbromide), 3 mg. phenobarbital, and 60 mg. acetaminophen.

2. Andelman, M. B., et al., *Clin. Med.*, 4:585, 1957.
3. Klotz, A. P., *Am. J. Digest. Dis.*, 1:108, 1956.
4. Necheles, H., et al., *Am. J. Gastroenterol.*, 26:464,1956.
5. Schlosberg, C. J., *Am. Geriatrics Soc.*, V: 411,1957.

children all under two years of age, the taste may have been objectionable. In the nine children who had diarrhea, it was felt that because of the presence of pipenzolate methylbromide in this product, no binding agent such as kaopectate, kaolin, or bismuth was needed. In every instance, the diarrhea disappeared within 48 to 72 hours. In the 10 cases of vomiting with abdominal pain, the symptoms disappeared within 24 hours.

An additional three infants, all under two years, received the pediatric antipyretic spasmolytic formula following the injection of an immunizing vaccine. It was thought that this product might minimize the irritability and the temperature rise that so often follows immunization with diphtheria, pertussis, and tetanus. It was difficult to determine whether the absence of fever in these immunization cases was due to the mildness of the reaction to the vaccine or to the effect of this product. Two of these children had received the same dose of this vaccine a month prior to this visit and had experienced both a rise in temperature and moderate irritability.

Summary and Conclusion

Forty-one infants and children selected at random from private practice received this new preparation in lieu of aspirin or aspirin substitutes. Antibiotics were used concomitantly. The age range of the patients was from three months to 10 years. With the exception of three cases, the drug was well accepted and well tolerated; in these three the taste may have been objectionable. The antipyretic effect was as beneficial as that of aspirin or aspirin substitutes. The average drop in temperature was 1.5°F. within three hours. Where present, the symptoms of abdominal pain and diarrhea were alleviated without the use of additional special medication.

It is a well-known fact that most parents experience difficulty in administering a number of different medications to their children during infectious periods. It is not uncommon in our practice to prescribe an antibiotic, aspirin or other salicylates, and some sedation in treating infants and children with infection accompanied by elevated temperatures. Occasionally an additional prescription is necessary to relieve the gastrointestinal symptoms that frequently accompany such febrile episodes. This new pediatric antipyretic spasmolytic preparation has been found to relieve or lessen the common symptoms that are experienced in febrile infections in infants and children, and to lessen the possibility of a febrile convulsion.◄

Preliminary Observations on a Topical Nasal Decongestant in Infectious States

HAROLD J. MEGIBOW, M.D., *Ramsey, New Jersey*

The preparation, which contains a steroid and an antibiotic, effectively relieved nasal congestion in 140 of 195 patients treated. An additional 20 had fair relief of their symptoms. Side effects, seen in three patients, consisted of dry nose, nausea, and vomiting. No alterations in blood pressure were seen.

A topical nasal decongestant* containing a steroid and an antibiotic in a plastic spray squeeze bottle has been reported[1-4] to be therapeutically effective with an almost complete lack of rebound phenomenon or other severe side effects attributed to nasal decongestants in common usage. Because of these favorable reports in patients with noninfectious congestive disorders, it was decided to investigate the usefulness of this compound in patients with infectious nasal congestive states.

Material and Methods

The preparation contains an aromatic imidazoline derivative (Otrivin) which relieves edema and hypersecretion of the nasal mucosa, a steroid (Ultracortenol) which has anti-inflammatory and anti-allergic activity, and an antibiotic (Neomycin) which has a broad spectrum of activity but produces little sensitivity or antigenicity.

The combination of these three products (as Otricorten) was used in 195 patients, aged two months to 80 years, with varying degrees of acute and chronic disorders involving congestion of the nasal mucosa. Diagnoses included acute and chronic upper respiratory infection, allergic rhinitis, sinusitis, laryngitis, pharyngitis, external otitis following scarlet fever, and infectious states complicating pregnancy.

*Otricorten®, Ciba Pharmaceutical Products Inc., Summit, New Jersey.

1. Peluse, S. J., *Eye Ear Nose & Throat Month.*, 38:936,1959.
2. Jacques, A. A., & Fuchs, V. H., *J. Louisiana M. Soc.*, 3:384,1959.
3. Hagen, W. J., & Trelles, M. G., *Eye Ear Nose & Throat Month.*, 39:56,1960.
4. Kolodny, A. L., *Antibiotic Med. & Clin. Therapy*, 6:452,1959.

The usual dose of the decongestant was one or two sprays in each nostril from one to four times daily depending upon the severity of the infection.

Results

Of the 195 patients, 140 had good to excellent results, 20 had fair results, and 35 were not helped. Those who failed to respond had also failed to respond to other drugs in previous trials. Relief in most was rapid and lasted from four to five hours. The majority of patients required treatment for from four to five days.

Side Effects

Particular attention was paid to the many common side reactions seen with the use of preparations of this order; i.e., rebound phenomena, dry nose, sneezing, headaches, drowsiness, light-headedness, nervousness, palpitation, mental excitement, and possible blood pressure changes. In this series, one patient complained of dryness, one of nausea, and a third of nausea and vomiting. No alterations of blood pressure which could be attributed to the product were found in any patient.

Conclusions

Particularly from the standpoint of general practice, this is a preparation which gives consistent benefit and which can be prescribed without fear of side effects. Since no ill effects are encountered during its use, it should be given first preference in treating infectious or noninfectious congestive nasal disorders. It should prove of use to the otolaryngologist, the pediatrician, and the general practitioner.◀

Underweight Patients: Trial of Anabolic Agent

Having shown a mean weight gain of only 2.3 lbs. while on a 3000-calorie vitamin- and mineral-supplemented diet for 2 months, 25 patients aged 27 to 69 were given norethandrolone (Nilevar) for 2 months in a dosage of 10 mg. 3 times daily. Mean weight gain on the drug was 6.4 lbs., 14 patients showing a good weight gain (7 to 15 lbs.), 11 an increase in appetite, and 15 an improvement in vigor. A good response was shown by 12 of the 15 having no organic gastrointestinal ailment, as compared to only 2 of the 10 having demonstrable organic disorders.

Barowsky, H., et al., *Am. J. Gastroenterol.*, 35:37-41,1961.

Cystoscopic Removal of Ureteral Stones by Means of Davis Loop Extractor

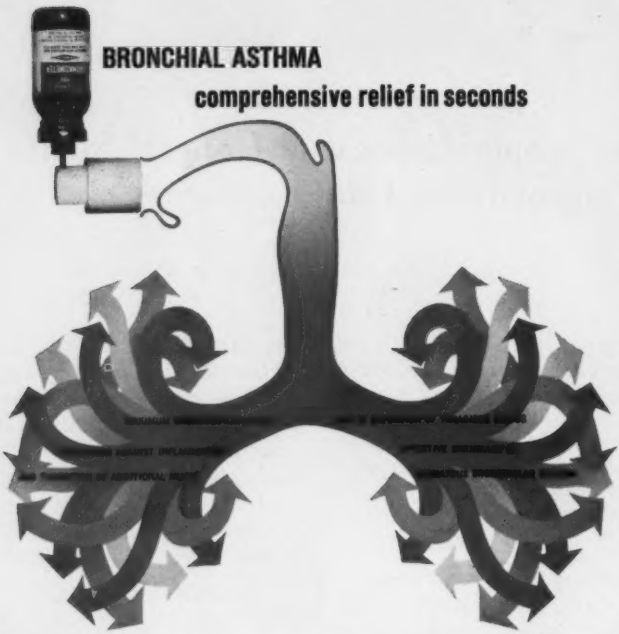
JOHN W. WARREN, JR., M.D.,* *Wichita, Kansas*

►*Since the time of the first cystoscopic examination of the bladder, it has been the ambition of various urologists to devise an instrument for the removal of small uretheral stones. This has resulted in the invention and perfection of such instruments as the one described in the following article.*◄

The instrument consists of a No. 6 olive tip catheter with a single filament nylon suture piercing the catheter at the 10 cm. mark and re-entering the catheter at both sides at the 15 cm. mark to traverse the lumen to the end. It is used by inserting it past the ureteral calculus, then forming a loop by tension on the nylon sutures. The loop is held in position by clamping the sutures as in the photograph (Figure 1). The operator gradually withdraws the instrument until resistance is met indicating the stone has been engaged (Figure 2). Further gradual tension is exerted until the loop is withdrawn from the ureteral orifice completing the operation. If the stone becomes disengaged the loop can be relaxed by releasing the nylon suture and another "pass" can be made as the tip of the catheter is already beyond the stone.

Occasionally a stone too large for such an extraction is encountered and, in this event, release of the nylon sutures collapses the loop and the instrument can be removed. As it is normally a catheter, it may be left in place to drain a hydronephrotic kidney. Cystoscopic removal of ureteral stones is preferred over the "wait and watch' method as the obstruction to the urinary flow is sooner relieved and the damaging back-pressure removed from that kidney. Return to work is much earlier and the anxiety caused by the constant threat of renal colic is relieved. Its advantages over that

*Department of Urology, The Wichita Clinic.



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Bronkometer delivers at the mouthpiece 200 measured doses of: 350 mcg. isoetharine methanesulfonate (0.6%); 70 mcg. phenylephrine HCl (0.125%); and 30 mcg. thenyldiamine HCl (0.05%) with inert propellants and preservatives. Average adult dose is one or two inhalations. Occasionally, more may be required. Even though Bronkometer has a wide margin of safety, the usual precautions associated with the use of sympathomimetic amines should be observed.

Bibliography: 1. Spielman, A. D.: Evaluation of a New Antiasthmatic Compound Aerosol, In press. 2. Lands, A. M. et al.: The Pharmacologic Actions of the Bronchodilator Drug, Isoetharine, J. Am. Pharm. A. (Scient. Ed.) 47:744 (Oct.) 1958.

For full information on Breon's five antiasthmatics, see pp. 538-539 of the 1961 **Physicians' Desk Reference** plus the 2nd, 3rd or 4th quarterly supplement.

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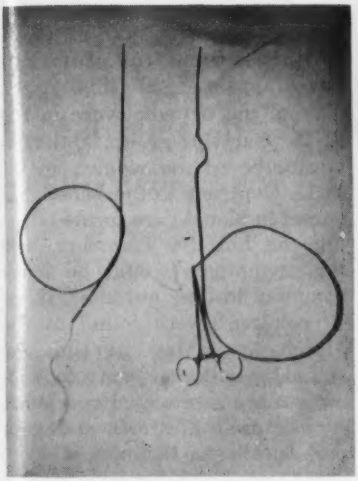

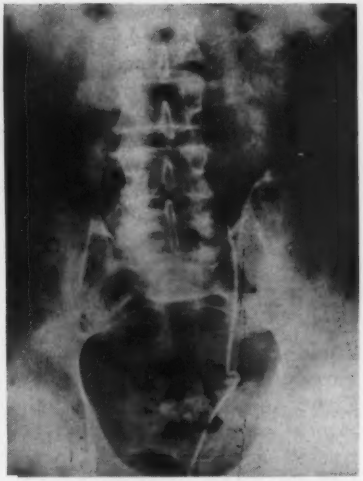

Figure 1, stone extractor (left) as it is inserted and (right) with the loop formed. Figure 2, stone caught in the loop.

of open removal of a stone are obvious.[1]

Personal Usage Experiences

The extractor has been used by me with 36 consecutive patients. All were stones in the lower third of the ureter with the smallest diameter 0.5 cm. or less. Most of these were watched varying lengths of time for spontaneous passage and the extractor used only when passage seemed unlikely. The operation was deemed successful when: (1) the stone was removed immediately; (2) the stone was broken up and came out as sand (proof of removal furnished by negative x-ray film); or (3) spontaneous passage of the stone within 72 hours after the operation. The latter course happens frequently and is due to the dilatation of the intramural portion of the ureter by the withdrawal of the loop.

In the 36 patients comprising this series, 37 stone extractions were attempted. The procedure was done on one patient twice several months apart for different stones. There were five failures—four in which the instrument could not be passed beyond the stone, and one in which the stone was too large to be extracted in this manner, when open ureterolithotomy was nec-

1. Davis, T. A., *J. Urology*, 72:346-349,1954.

essary. The stone was flat and had been seen on edge in KUB x-ray. When grasped by the loop, it was rotated showing that it was much larger than had been realized. Of the 32 extractions deemed successful, 14 stones were removed at the time of the extraction, six were passed spontaneously within 48 hours, and 12 were broken up and passed as "sand." Removal of the latter was confirmed by x-rays disclosing the absence of the previously noted stone shadows. Eighty-seven per cent of the stones were successfully extracted and 13 per cent were failures. There were no complications.

Interesting Statistics

Other interesting statistics have appeared in this study. Half of the patients were in the 31-50 year age group, and men outnumbered the women by 21 to 15. Contrary to the belief that stones in Kansas are formed during the hot dry summers, and that symptoms would be more common in the autumn, 17 or 47 per cent were found in the March-April-May period. As spinal anesthesia seems to promote more ease of the operation, it was used 27 times and general anesthesia 10 times.◀

J. Kansas M. Soc., 61:199-200, 1960. Reprinted with permission of the editor.

Gibbs' Hypsarrhythmia: Corticotropin Therapy

This disorder sets in usually in the first, and rarely after the third, year of life. The spasms occur up to 100 times a day. Some children die in a few years, most of them with a grave dementia. Almost none under 3 years with clinical grand or petit mal presents hypsarrhythmia. In the presented case a girl of 5 months with no familial predisposition to epilepsy or other disease and of normal development showed onset of motor epilepsy in the course of a few days. For 3 or 4 weeks, more than 100 attacks often came on in one day, each lasting a few seconds. There were no other signs of organic disease. EEG showed a number of almost continuous disorganized and extremely abnormal curves. The condition was aggravated by phenobarbital and did not improve on dimedione. Corticotropin for 10 days, started a month after the onset of the disorder, was followed by complete remission without recurrence after 5 months of ambulant observation.

Hansted, C., & Thygesen, F., *Nord. med.*, 61: 895-899,1959.

Use of Ice Collar in Paroxysmal Auricular Tachycardia

RANDOLPH MURPHY, M.D., *Norphlet, Arkansas*

►*Other measures having failed, an ice collar that had been kept in a refrigerator at 38° F. was laid transversely, with no pressure, across the neck at the level of the carotid sinuses as the patient lay supine. In three seconds a normal rhythm of 60 beats per minute was established and persisted after a second application.*◄

A man of 61 who had had frequent attacks of tachycardia since the age of 16 was seen in the office with a regular apical rate of 172 per minute. His only complaints were "fast heart" and slight weakness. When hospitalized before for tachycardia, an ECG diagnosis of supraventricular tachycardia had been made; the apical rhythm was regular, rate 140 to 180 per minute. The patient received an initial dose of 0.6 mg. of lanatoside C (Cedilanid) intravenously and another dose of 0.3 mg. two hours later. His rate then returned to normal, the total dose of lanatoside during hospitalization being 0.9 mg. On his discharge, digitalis (Digiglusin) was prescribed. He then did well until the attack which brought him to the office, when it was assumed that the dosage of digitalis was no longer adequate.

In the office, pressure was applied to the carotid sinuses, 1½ grain (0.1 gm.) secobarbital (Seconal) was given by mouth and the Valsalva maneuver was carried out, all without benefit. A rubber ice collar was then laid transversely, with no pressure, across the neck at the level of the carotid sinuses as he lay supine. The ice collar had been kept in a refrigerator where a temperature of 38° F. was maintained. In 3 seconds a normal rhythm of 60 beats per minute was established. The ice collar was removed and a few minutes later, while the blood pressure was being taken, tachycardia was resumed. The ice collar was reapplied as before, and the rate reverted to normal immediate-

ly. Thereafter, though the ice collar was removed, the normal rate persisted. The collar (No. 415 Davol Redi-Freeze) measured 3 by 4 by 12 in. and weighed, with the water it contained, 11 oz.◀

J.A.M.A., 172:555,1960.

Allergic or Vasomotor Rhinitis: Treatment with Parabromdylamine Maleate

Allergic and vasomotor rhinitis are not clearly distinguishable, there being inflammation and hyperemia or pallor, ischemia and edema of the nasal mucosa in all cases of both. Response to antihistamine therapy, while interpreted by some as evidence of allergy, may be related to the action of these drugs in decreasing capillary permeability and thus reducing edema.

More than 200 patients seen in an outpatient clinic were given the antihistaminic parabromdylamine maleate (Dimetane) for relief of symptoms of rhinitis. Of these, 59 children and 112 adults were followed for 6 months or longer, 87% reporting satisfactory relief. The sustained-action 12 mg. tablets given twice daily seemed to be more effective than the 4 mg. tablets given 4 times daily. The elixir was given to 7 children for 4 to 6 weeks. Although all 7 noted improvement the first week, 4 became refractory. Best responses to the drug were seen in patients having multiple rather than single manifestations of allergy. The drug was of little value in treatment of the common cold.

Eustachian salpingitis with definite hearing loss was treated by intranasal Eustachian tube catheterization followed by parabromdylamine, satisfactory improvement after one inflation being reported by 46 of 50 adults (though recurrence was usual if the antihistamine was taken for less than one week). Parabromdylamine therapy for postnasal drainage and nasal obstruction relieved 55 of 62 adults and 33 of 35 children. Cough and nasal obstruction not responsive to the usual cough remedies was relieved in 36 of 41 cases but recurred if therapy was stopped in less than 2 weeks. Sinus-like pain with nasal obstruction was completely relieved within a week in 48 of 50 cases. Nasal obstruction caused in 5 cases by prolonged indiscriminate use of nose drops was promptly relieved in all 5. Minor side effects such as drowsiness and dryness of the throat were reported by 13 patients.

Edmonds J. T., *Laryngoscope*, 69:1213-1218, 1959.

Surgery and Anesthesia and Recent Use of Certain Drugs

M. MINUCK, M.D., *St. Boniface, Manitoba*

►*Patients on corticosteroid therapy should be given extra doses prior to surgery to prevent adrenal cortical insufficiency. Tranquilizers will prolong action of narcotics and relaxants, and augment hypotensive effect of sodium thiopental. Those on chlorothiazide should be taken off the drug for 24 hours.*◄

The body reacts to stress by the immediate release of adrenaline and noradrenaline from the adrenal medulla, and from stores in the myocardium and in the vessel walls in an effort to restore the body's equilibrium. This neuro-humoral reaction is accompanied by, or may be followed in a few hours by, another hormonal phase, during which the anterior pituitary is stimulated by the secretion of adrenaline and also by reflexes from the traumatic cellular lesions. The anterior pituitary responds by producing adrenocorticotrophic hormone (ACTH). The ACTH stimulates the adrenal cortex to produce cortisone (and other corticoids), which perhaps helps to detoxify some of the noxious substances produced by stress on the cell. When cortisone is absent, as in Addison's disease, there is loss of vascular tone and an increase in capillary permeability. Adrenal insufficiency occurs with tuberculosis of the adrenal glands, destruction by neoplastic invasion, overwhelming infection with toxemia (Waterhouse-Friderichsen syndrome), surgical removal of the adrenals or pituitary, and steroid therapy. All patients coming to surgery should be questioned regarding previous cortisone therapy, this being a frequent cause of adrenal cortical insufficiency. Among 2490 patients questioned on admission to a hospital, 140 (5.6%) reported receiving the drug at some time before operation. Patients who have had this therapy in the past two years may be divided into three categories:

1. Those who have received little cortisone, i.e., less than one gram, and require minor surgery.

2. Those who have received over one gram and require major elective surgery.

3. Those who have received over one gram and require emergency surgery only.

Group 1 requires assurance that a rapid-acting intravenous preparation of cortisone (e.g., Hydrocortone) is at hand in the operating room.

Group 2: Beginning 48 hours before operation, 150-200 mg. of cortisone daily is given intramuscularly and on the morning of operation, a further 100 mg. is administered. Additional amounts may be required during the procedure, depending on its severity and duration and after the operation, 50 mg. intramuscularly every 6 hours for 48 hours. Should complications occur that do not respond to routine therapy, more cortisone will be required.

Group 3 should receive 100 mg. of cortisone parenterally before, a further 100 mg. during, the operation; and 50 mg. every 6 hours for 48 hours postoperatively, the patient then being weaned from cortisone as in Group 2. Hypotension or respiratory depression not yielding to routine therapy indicates a need for more cortisone. One need not fear that this amount of cortisone will interfere with wound healing.

Reserpine and rauwolfia alkaloids are widely employed for tranquilizing, more particularly for hypotensive action. These drugs produce these effects by depleting the adrenal glands of adrenaline and noradrenaline. In addition, the stores of noradrenaline in the myocardium and the vessel walls tend to be depleted after prolonged therapy with reserpine. The normal action of noradrenaline is to maintain the heart rate and vascular tone in response to sympathetic stimulation. A patient who has been on prolonged reserpine therapy may respond to a normal induction dose of an anesthetic, or to minimal blood loss, by a profound drop in blood pressure.

Treatment may be difficult, and prolonged hypotension, especially in the patient with preexisting coronary disease, can be disastrous. Acute myocardial infarction, acute pulmonary edema and cerebral thrombosis have followed these episodes of hypotension.

Major elective surgery can be performed in patients who have been receiving reserpine if the drug is discontinued for two weeks before surgery. Great care must be taken with the patient who has been on the drug within

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*The term "antidoloritic" has been coined by Merck Sharp & Dohme to describe an agent designed to allay pain associated with inflammation—dolor = pain, itic = associated with inflammation.

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the past six months. Emergency surgery may be carried out if one uses atropine 1/75 grain, for premedication and for treatment.

The patient on chlorothiazide therapy should be taken off the drug 24 hours before surgery and infused with 500 cc. of 6% dextrose. Then, a normal operative and postoperative course may be expected.

Long-term use of tranquilizers up to the time of surgery will prolong the action of narcotics and relaxants and augment the hypotensive action of sodium thiopental.◀

Canad. M.A.J., 82:1008-1011,1960.

Ingestion of Ammonia: Report of Treatment in Two Cases

Drinking ammonia produces a liquefying necrosis, burning deeply into the muscular layers of the esophagus and causing scarring and stricture formation at 4 to 6 weeks. It may also cause gastric strictures, usually in the antrum, and its fumes may irritate pulmonary and eye tissues.

Immediate gastric lavage was erroneously done in 2 patients, the corrosive action of ammonia not being appreciated. Bougienage was withheld later because ammonia was believed to cause only superficial burns without secondary stricture formation. The degree of damage and the patients' emotional reactions made dilation impossible. Recovery, even following surgery, has been prolonged and difficult.

Others found that in cases of esophageal burns alone, early prophylactic bougienage has been effective. Early esophagoscopy and barium esophagography are necessary to find the depth, nature, and extent of the burn. Some advocate purely supportive treatment during the first few weeks of superficial healing, followed by various types of dilation. As further therapy in reducing the inflammatory response and resultant scar formation, adrenocorticosteroids, ACTH and antibiotics have been used with favorable results. Antral strictures usually require gastroenterostomy.

It is concluded that an effective program should start with early x-ray study and esophagoscopy, and if burns are found, prophylactic bougienage. The use of steroids should be considered if burns are severe. In patients in whom antral strictures develop, a surgical detour must be planned.

Norton, R. A., *New England J. Med.*, 262:10-12,1960.

Present Status of Management of Perforated Appendix

FRANK GLENN, M.D., and
BJORN THORBJARNARSON, M.D., *New York, New York*

►*Any loss of fluid and electrolytes should be replaced before operation. Antibiotics should be given until cultures and sensitivity studies of peritoneal fluid are made. In the elderly, position in bed should be changed frequently, oxygen given, and gastrointestinal suction maintained until flatus is passed.*◄

In the adult vague epigastric discomfort commonly develops into a boring pain unrelieved by change in position and within two or three hours the pain shifts to the right lower quadrant. It is accompanied by the "downward urge," but is not relieved by defecation, and it is soon followed by nausea and perhaps vomiting. There is localized tenderness in the right lower quadrant with guarding and rebound phenomena.

Unusual manifestations are seen mainly in the very old and very young, with approximately 70% of patients over age 65 having perforated appendices when operated on; children younger than six years had an even higher incidence of perforation.

Perforation in the young child is common because the omentum is not long enough to afford the protection it later gives, and because of the difficulty in recognition and consequent delay in hospitalization. The child old enough will give a history almost the same as that for adults while a younger one tends to lie still in bed, sometimes with the knees drawn up and turned to the right with some flexion of the right thigh on the pelvis; he will not accept a lollipop or an ice cream cone or ask for food. If the child refuses to allow the doctor's hand on its abdomen, the same information may be gained by the mother's hand under the observing eye of the physician. A child when directed may press with its own hand deep into the right lower quadrant and if there are no signs of

discomfort, appendicitis is a rare possibility. Rectal examination, often very helpful, should be done last.

In old persons the progress of appendicitis is much more rapid and is accompanied by less alarming symptoms; much less intraluminal pressure is needed to collapse the capillaries and arterioles and cause necrosis of the wall, and old persons feel less pain. Absence of leukocytosis is not uncommon in severe intra-abdominal infection in old persons, but increased numbers of young forms of polymorphonuclears practically always are present.

The temperature in children and young adults with appendicitis usually is elevated only slightly in the early stages and may be normal in the elderly with perforations. High fever is not uncommon in the early stages of the uncomplicated form of the disease.

The most common mimic of appendicitis in children is nonspecific mesenteric adenitis, both tending to follow upper respiratory infections and having the same symptoms. Reasonable doubt demands exploration. Some patients who do not have appendicitis are found to have other surgical conditions.

Of 134 cases of acute appendicitis in patients over 65, 70% had perforation (mortality 6.4%). Of 600 children 10 years and younger operated on for acute appendicitis 55% had perforation (mortality 1%); under age two, 100% of boys had perforation and 90% of girls.

Cigaret drains are used when a perforation has resulted in a localized abscess or peritonitis. Our incidence of postoperative hernias after drainage through McBurney incisions is 15%.

Operation should not be carried out until any loss of fluid and electrolytes has been replaced; a Miller-Abbott tube may be indicated later. Penicillin and streptomycin should be given, unless specifically contraindicated, until cultures and sensitivity studies of the peritoneal fluid are made. Once the optimal condition has been achieved, within 12 hours the appendix is removed through a McBurney incision, and drainage is instituted.

The immediate postoperative period is the most critical. The elderly patient should always be given oxygen, the position in bed changed frequently and exercises encouraged. Gastrointestinal suction is maintained until flatus is passed. Hydration, motion, and adequate oxygenation are important in the prevention of pulmonary emboli. Elderly women who often have some

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varicosities, should have their legs wrapped with an elastic bandage. Constant attention and care from hour to hour, rather than from day to day, are essential for reducing to a minimum the mortality from appendiceal peritonitis.

The antimicrobials are perhaps the single most helpful factor after an operation has been carried out, as a rule systemically administered. Recently, neomycin intraperitoneally has gained favor. No more than 1 Gm. of this drug should be given.◀

New York J.M., 60:1615-1620,1960.

Angina in Mitral Stenosis

Classical rheumatic mitral stenosis in a woman of 40 was complicated by the appearance of angina pectoris late in her illness. In spite of a decline in weight to less than 100 pounds and the extreme limitation of her exercise tolerance by dyspnea, she had experienced substernal pain with radiation down both arms, of mounting severity during the previous year, on even slight exertion; frequently it awakened her at night. The pain was relieved promptly by rest or by nitroglycerin which she took daily and there was no history of prolonged chest pain suggestive of infarction.

There was selective enlargement of the right ventricle, the left atrium and the pulmonary artery. Vascularity of the lung fields was increased and the "Beta lines of Kerley" (indicative of increased pressure in the pulmonary veins) were present near the costophrenic angles. No hypertrophy of the left ventricle nor any intracardiac calcification was demonstrable. A mitral valvulotomy was performed, following which there was a marked decrease in palpable tension in the greatest enlarged pulmonary artery.

When discharged from the hospital 2 weeks after surgery heart rhythm was regular and the angina had not recurred. Two months later she was reported to have remained free of both congestive failure and angina, to be gaining weight and resuming physical activity. Angina pectoris has been variously estimated to occur in 8 to 10% of patients with mitral stenosis. Its mechanism is obscure; perhaps the most plausible theory is that it arises from compression of the left coronary artery between the enlarging left atrium and pulmonary artery.

Groom, D., *J. South Carolina M.A.*, 56:187-189,1960.

Rehabilitation of the Cardiac Patient

AMASA B. FORD, M.D., *Cleveland, Ohio*

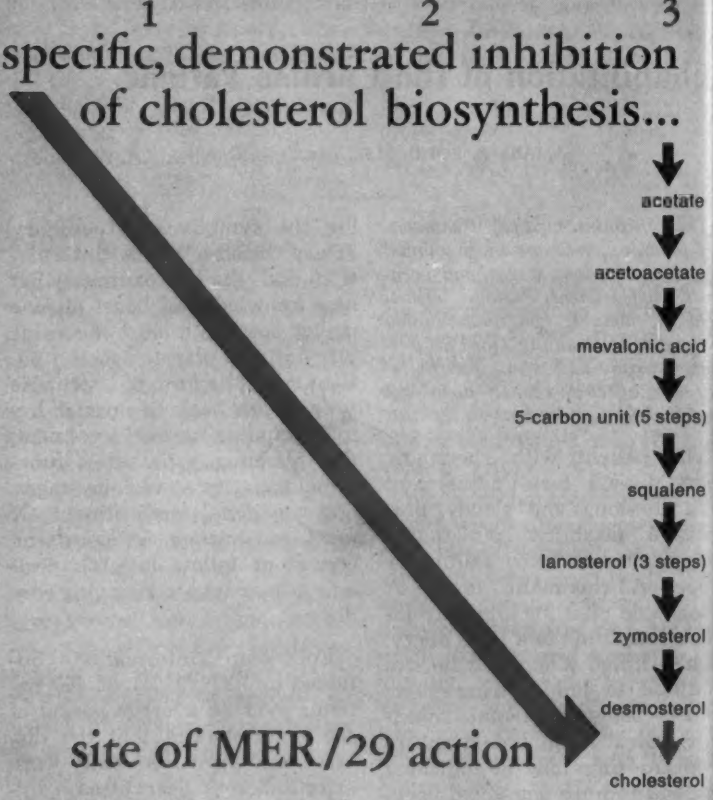
►*This includes medical treatment, diet planning, estimate of functional capacity at various stages, and vocational readjustment. Periodic adjustment to changing conditions should be made. Retraining for a low-energy, highly-skilled job may be required to offset decreasing functional capacity.*◄

The patient with rheumatic heart disease faces adjustment to a life-long and slowly progressive disability punctuated by episodes of heart failure or recurrent rheumatic fever. A reasonable plan for him may include retraining in a low-energy, highly-skilled job which he can continue to hold during years of decreasing functional capacity. Surgical treatment at an appropriate time may be indicated and will require emotional preparation and financial planning. An important part of the plan for many rheumatic heart patients is regular antibiotic prophylaxis against streptococcal infection.

The middle-aged man developing the symptoms of coronary artery disease needs information and the reassurance that new knowledge of heart disease makes possible a more favorable prognosis. A plan for such a patient takes the form of a stepwise progression back to normal living, including medical treatment, diet planning, estimate of functional capacity at various stages, and vocational readjustment. Of most importance is long-term, consistent follow-up with periodic adjustment to changing conditions.

Follow-up information obtained on 433 (94%) of 460 patients over an average period of six years showed that the diseases seen most frequently were arteriosclerotic heart disease, hypertensive cardiovascular disease and a combination of the two. These three categories included 60% of the patients, while another 20% had rheumatic heart disease. According to the Functional and Therapeutic Classification of the New York

HOW MER/29 DIFFERS FROM OTHER CHOLESTEROL-LOWERING MEASURES



1. The primary, the *only* known action of MER/29 is to lower the total body pool of sterols (serum and tissue); no effect on any other system or organ reported to date.

2. "Using each patient as his own control, the peak *total* sterol radioactivity after injection of mevalonic acid-2-C^{14} was compared on and off MER/29. As much as a 50 per cent inhibition on MER/29 was observed in some patients."
—Steinberg, D.; Avigan, J., and Feigelson, E. B.: Circulation *22*:663 (Oct.) 1960.

3. "Studies of lipid metabolism have stressed the importance of cholesterol biosynthesis, as opposed to cholesterol intake, in determining cholesterol balance."
—National Heart Institute: Diet, Hormones, and Atherosclerosis..., Bethesda, Md., U.S. National Institutes of Health, 1958.

...leading to specific, demonstrated advantages in cholesterol-lowering therapy

particularly in patients with coronary artery disease, generalized atherosclerosis, and other conditions thought to be associated with abnormal cholesterol metabolism

MER/29 REDUCES CHOLESTEROL IN AS MANY AS 8 OUT OF 10 PATIENTS: MER/29 reduces both serum and tissue cholesterol without strict adherence to diet. Although some physicians prefer to use MER/29 in conjunction with controlled diets, cholesterol can be reduced successfully without such limitation.

CONCURRENT BENEFITS REPORTED IN SOME PATIENTS: In patients with coronary artery disease, some of the concurrent benefits reported include decreased incidence and severity of anginal attacks, improved ECG patterns, diminished nitroglycerin dependence, and increased sense of well-being.

MER/29 HAS PRODUCED FEW SIDE EFFECTS, NO TOXICITY: Patients have been treated with MER/29 for continuous periods up to 19 months. In no case has there been evidence of serious toxic effects on the function of any vital organ or system. Side effects (nausea, headache, dermatitis) are rare and have usually been associated with dosages greater than those recommended for effective therapy.

MER/29 is compatible with other cardiovascular therapies. It can be used along with measures which control anxiety, hypertension, obesity and other conditions associated with cardiovascular disorders. These include nitroglycerin, PETN, and anticoagulants.

CAUTION: Since long-term MER/29 therapy may be necessary, periodic examinations, including liver function tests, are desirable. Also, since MER/29 inhibits cholesterol biosynthesis, and cholesterol plays an important role in the development of the fetus, the drug is *contraindicated in pregnancy.*

DOSAGE: One 250 mg. capsule daily, before breakfast.

SUPPLIED: Bottles of 30 pearl gray capsules.

Complete bibliography and product information available on request.

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State Heart Association, 83% of Class I, 61% of Class II, 40% of Class III, and 34% of Class IV patients had six-year survival rates. An abnormal response to the Master two-step test indicated twice the mortality rate of those with normal responses, a diastolic blood pressure above 120 twice the mortality rate of those whose diastolic blood pressure was below 100.

When the patients were first seen, 58% were not working, 54% were judged capable of returning to their previous job or to more strenuous work, 29% were advised to do lighter work, 10% needed estimation of work tolerance, 19% required further treatment, and 7% were rated unemployable. At follow-up, 82% worked part or all of the period between first and last visit or death. Those remaining employed lost only 3.8 days per 100 days for cardiac reasons, 1.9 days per 100 days for non-cardiac reasons. Of those initially advised to continue or increase their work, 80% were found to be employed at follow-up, whereas only one out of seven rated unemployable had been able to find work. Sixteen of the 20 referred for further vocational evaluation and training were working at the time of follow-up.◄

Minnesota Med., 42:1203-1208,1959.

Preventing Emergence of Resistant Organisms: Use of Antibiotic-Sulfa Combination

A combination of the antibiotic triacetyloleandomycin (Tao) and three sulfas (Taomid) successfully combatted a wide range of urinary tract infections in clinical trials with 276 patients. Each received 2 tablets of the drug 3 times daily for 5 days. At the end of that period, 197 patients, or 72 per cent, recovered or showed good improvement.

Six patients reported side effects. All of these reactions were mild, involving rashes or diarrhea and none was considered sufficient cause to discontinue therapy. This small percentage of side effects indicates that the drug would be useful in chronic cases where it could be given for a long period without causing adverse effects.

No development of resistance was observed, and theoretically this combination has a place in prevention of coccal resistant organisms.

Carroll, G., et al., *J.A.M.A.*, 174:1603-1605, 1960.

Needle Biopsy of the Liver

DANIEL STOWENS, M.D. *Los Angeles, California*

►*This was valuable in establishing diagnosis, especially of congenital malformations of biliary system in early infancy. It is a reliable guide in differentiating operable from inoperable malformation, and can be used for studying diseases other than those of hepatic origin. There were no fatalities.*◄

Of 1000 children, 700 were infants aged 12 weeks or less, only 80 being over 4 years. Indications for biopsy were jaundice in 211, jaundice and hepatomegaly in 521, hepatomegaly (isolated) in 75, hepatomegaly in association with signs of generalized disease in 71, localized hepatic mass in 62, and fever of unknown origin in 16. Biopsy represented a final effort to arrive at a diagnosis in 13 cases and was done for research purposes in 31.

A modification of the technique for adults was used. Although children over 1 year were given a barbiturate, infants were sufficiently relaxed when given a bottle to nurse. After infiltration of the abdominal wall by a local anesthetic, a small incision was made in the skin to facilitate introduction of a standard Vim-Silverman biopsy needle. After the needle with the solid stylette was introduced into the liver it was held by the thumb and index finger of the left hand, the other 3 fingers being spread fanwise on the abdomen. With hand, needle and liver thus moving together with respiration, there was no need for the breath to be held. There were no fatalities and no instances of excessive peritoneal bleeding. All but 1 of the children old enough to be questioned reported that the procedure was painless.

Although 27 different disease entities were found, congenital malformations of the biliary system predominated, being found in 278 children (331 biopsies). Of these, diagnosis was later confirmed either at autopsy or at operation in 277. Especially gratifying were diagnosis of salivary gland virus infection (cytomegalic inclusion disease) in 7, her-

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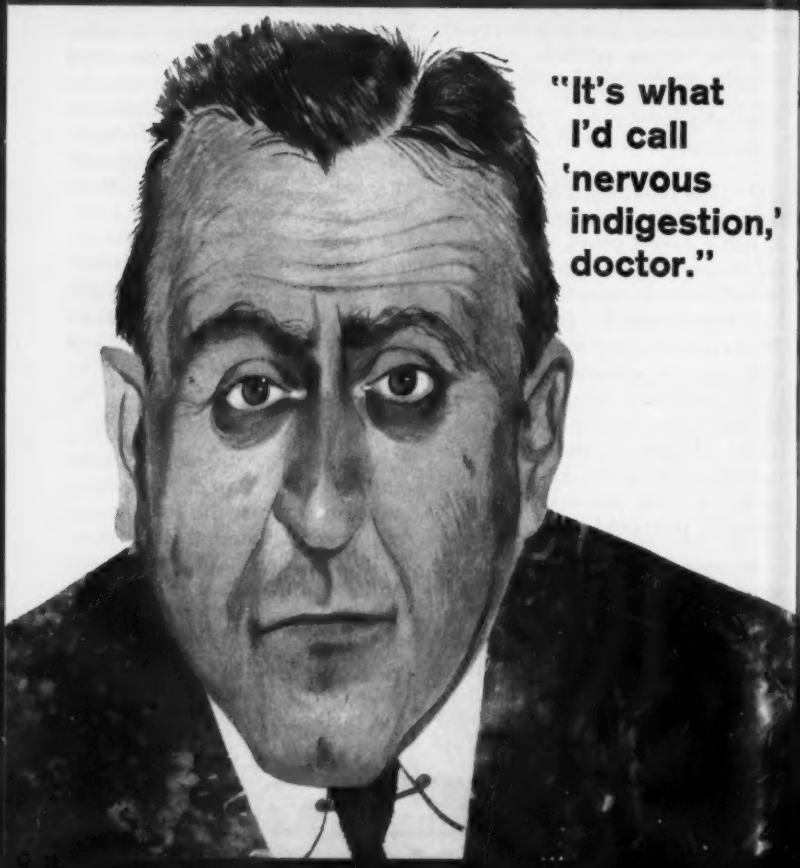


pes simplex infection in 2 and histoplasmosis in 2, these conditions having been suspected clinically but other diagnostic procedures having failed to confirm the diagnoses. In 140 children, many having hepatomegaly without other forms of disease, biopsy revealed no anatomic lesions of the liver. Including these and others found to have lesions of unknown etiology, there were 365 children having clinical evidence of hepatic disease whose condition could not be satisfactorily explained on an anatomic basis.

Needle biopsy of the liver in infants and young children is safe and inexpensive and is:

1. Effective in establishing diagnosis.

2. Especially valuable in diagnosing congenital malformations of the biliary system in very early infancy.

3. Reliable as a guide in differentiating operable from inoperable malformations.

4. Feasible as a research tool for studying diseases other than those of the liver.◀

Am. J. Gastroenterol., 33:294-304,1960.

Blood Pressure: Home Recordings

That anxiety and psychic stress affect blood pressure is generally recognized, yet in the management of many hypertensive patients these factors are neglected. Suitable recordings of blood pressure can be obtained at home for almost all patients. In those in whom severe hypertension has become fixed and a good therapeutic response is not anticipated, the discouragement which might develop from therapeutic failure must be handled by methods most suitable for the circumstances.

It is commonly thought that patients are more anxious if they know their blood pressure, but in this study, patients were often more disturbed when wondering and worrying about the level. Obviously, if a patient becomes anxious when he knows his blood pressure, it may be advisable to modify this plan of management.

Through such recordings, the physician is able to better regulate the dosage of antihypertensive drugs. He and the patient determine factors in the life situation which deleteriously and beneficially affect the patient's blood pressure so that measures and practices are varied to best advantage.

Burch, G. E., & Depasquale, N., *Am. J.M. Sc.*, 240:273-279,1960

Atherosclerosis: Reversibility

Lipids move into arterial tissue when serum cholesterol levels are above 250 mg. per 100 cc., and are apparently resorbed from arterial tissue when serum cholesterol levels are below about 200 mg. per 100 cc.; thus, cholesterol plaques should be thought of as resorbable "foreign" material. Their removal is important since the sheer bulk of these accumulated lipids actually reduces the lumina of smaller arteries, the accumulated lipids behave like foreign bodies and exert progressive irritative and destructive processes upon the arterial wall, and the presence of large amounts of lipids and the secondary scarring and destruction of the arterial wall that accompany them lead to considerable abnormal vascularization of arterial walls. Proper conditions for removal of the irritating lipids are a reduction of the concentration of certain plasma lipids (with the total serum cholesterol level serving as an index of their concentration) so that the lipids can be mobilized and removed from the arterial wall.

Taylor, C. B., et al., *Illinois M.J.*, 119:80-81, 1961

Lymphocytic Leukemia: Symptomatology and Therapy

Of the 160 patients (125 men and 35 women), 63 were aged 50 to 60, 39 from 60 to 70, and 33 from 40 to 50. Only 2 were under 20 years. The high incidence among those in the fifth decade is significant. On admission, 93 (58.1%) had a large spleen, 97 (60.5%) general enlargement of the lymph nodes, 28 (17.5%) localized enlargement of lymph nodes, 37 (23.1%) enlarged, mediastinal lymph nodes, and 6 (3.7%) enlarged abdominal lymph nodes. Only 20 patients had a rise of temperature at any time. Sternal puncture on 103 patients confirmed diagnosis in 91. Necropsy, done on 16 of the 39 having died, was confirming in every instance. Of the 160, 13 had x-radiation alone, 53 cytostatic chemotherapy alone, 68 both these therapies, and 26 no specific treatment. Average survival time of the 160 was 46 months. Best results were obtained in those treated by x-rays alone (average survival time 54 months), next best in those having no specific therapy (average survival time 52 months).

Heilmeyer, L., et al., *Klin. Wchnschr.*, 37:790-794,1959.

Peptic Ulcer as Manifestation of Hyperparathyroidism

The complex, diverse, and fluctuating symptomatology of hyperparathyroidism due to adenoma is a result of altered physiology of other organs created by the associated chemical imbalance. Some of these secondary effects may overshadow the original disease, causing a critical condition appearing to be the primary problem. The test generally employed for screening of cases of suspected hyperparathyroidism is the serum calcium determination which is subject to considerable laboratory error. Furthermore, serum calcium is increased by excessive ingestion of vitamin D, by increased dietary calcium, and by impaired renal function. It may be decreased in cases of lowered serum total protein and with infusions of saline.

The presence of two hormones produced by the parathyroids has been postulated, one affecting calcium and the other phosphate metabolism. In one patient, only after the tentative diagnosis of hyperparathyroidism was made and the calcium lowered (restraint of a Sippy diet in spite of a proven ulcer), did the laboratory data fall in line. Of possible significance is the dislike for milk that accompanied the patient's intolerance and which has been mentioned as a feature in other case histories.

Early diagnosis of hyperparathyroidism would seem to depend largely on an awareness of the diversity of symptoms. Reliance on a single test, or too little attention to minor chemical changes, have caused delay in diagnosis, resulting in added morbidity and in some instances unnecessary surgery on various organs.

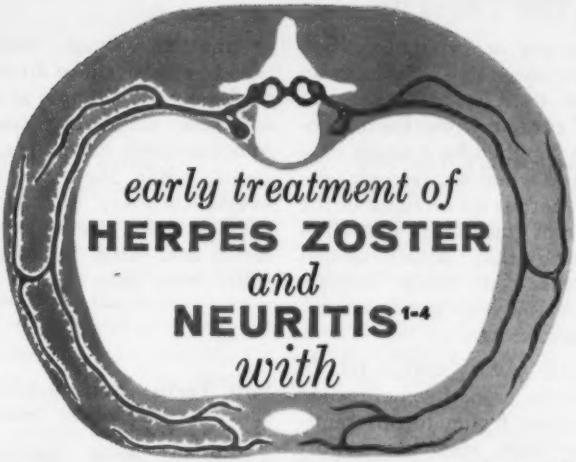
Morse, E. K., *J. Maine M.A.*, 51:1-6,1960.

Atypical Angina

It is not known whether oxygen deficiency in the coronary venous system directly stimulates pain-sensitive afferent nerve endings, or whether it alters myocardial metabolism and leads to nerve stimulation by excessive or abnormal metabolites.

Evidence in favor of the occurrence of coronary spasm is the occasional attack of angina at rest unaccompanied by tachycardia, sudden death without evidence of major coronary arterial occlusion, and as an explanation of action of small doses of nitroglycerin which relieve pain without altering cardiac output or blood pressure. The impressive fact about pseudo angina is that it is usually followed by coronary infarction.

Anginal pain is likely to occur when one or more coronary



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SUPPLIED: boxes of 10 ampuls (1.3 cc.). For detailed information, refer to PDR, page 731, or write to our Medical Department.

References: 1. Baker, A. G.: Penn. Med. J. 63:697 (May) 1960. 2. Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. 5. Sforzolini, G. S.: Arch. Ophthal. 62:381 (Sept.) 1959.

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arteries are occluded, or when coronary blood flow is drastically reduced in relation to the degree of cardiac work. Each myofibril is supplied by a single capillary and when hypertrophy develops there is no increase in the number of capillaries. It is likely, then, that hypertrophied myofibrils can easily become ischemic and work at a mechanical disadvantage.

Angina is very rarely felt in the thumbs, a point sometimes of value when trying to differentiate the true angina of effort syndrome from infectious angina caught from a business associate. True pain radiating to both arms is most unlikely to be due to anything other than cardiac ischemia. Pain caused by pericarditis is felt only in the chest and from the onset is aggravated by breathing. Sometimes pain is felt only in the lower jaw, or just between the scapulae. Increased cardiac work after meals may cause angina and the pain be confused with that of peptic ulceration, but the onset is usually immediate rather than delayed for an hour or so.

There is no operation which will adequately perfuse an ischemic myocardium. Any operation which involves opening the pericardium will partially or completely remove severe anginal pain. There has never been postmortem proof that new blood vessels can be directed into the myocardium. It is difficult to know whether a course of anticoagulants given to such patients, while they are resting, averts coronary infarction, but at least such treatment is rational and often provides great relief from pain.

Daley, R., *Proc. Roy. Soc. Med.*, 53:26-28, 1960.

Soft Teeth: Rehardening with Calcium Phosphate Solutions

Human teeth outside the mouth were softened with an acetate buffer, then treated with rehardening solutions containing either secondary calcium phosphate dihydrate or synthetic hydroxyapatite. Potassium fluoride solution was added in some cases. Four of 6 teeth showed return to presoftening hardness after treatment with the solutions for 8 days. Complete rehardening in 2 teeth did not occur because the softening process had proceeded too far. Addition of fluoride ions produced more insoluble enamel and appeared to affect the dynamic equilibrium between tooth surfaces and the oral fluid by accelerating the remineralization of dental enamel. Tooth brushing caused no appreciable loss of material from the surface of rehardened teeth.

Koulourides, T., et al., *Nature*, 189:226,1961

Carotid Body Tumor: Surgical Management

Surgical approach to these tumors is through a long lateral incision in the neck, extending from the tip of the mastoid process of the attachment of the sternocleidomastoid muscle at the sternum, along the anterior border of this muscle. The operation should not be done without adequate exposure of the external, internal, and common carotid arteries well above and below the lesion. Vessels should be encircled with tapes to control hemorrhage. If a good cleavage plane is obtained, removal is easy and simple; if the carotid bifurcation is encircled by the tumor, the dissection is slow and tedious and hazards are great. The surgeon should be prepared for arterial grafting or bypassing if it is necessary to extirpate the carotid bifurcation. In 5 patients, 4 having benign and 1 malignant carotid body tumors, such an approach was used and all are living and well without evidence of recurrence. Two had bilateral involvement, demonstrating the multicentric nature of these neoplasms.

Hodge, G. B., et al., *J. South Carolina M.A.*, 57:106-111,1961

Endotracheal Anesthesia for Tonsillectomy

Smooth anesthesia with minimal bucking or pharyngeal movement can be maintained by adding an analgesic concentration of ether to a mixture of nitrous oxide and oxygen. This method, used in more than 800 cases, includes premedication with atropine or scopolamine and meperidine or phenobarbital; induction with high flows of nitrous oxide and oxygen, ether being added within 30 to 45 seconds; orotracheal intubation under light anesthesia with 0.4 mg./lb. succinylcholine given intravenously; conversion to nonrebreathing technique with Fink or Leigh-Lewis value interposed between endotracheal tube and reservoir bag; and assisted respiration during operation, flows of nitrous oxide and oxygen being 6 and 4 L./min. and the ether setting on the Heidbrink bottle being varied between 2 and 5.

The presence of the endotracheal tube has not proved a handicap to surgeons, and some find it helpful in facilitating exposure for difficult dissections or bleeders. No complications attributable to intubation have been seen. Analysis of a sampling

of 50 cases showed that:

1. Mean time from induction to placing of the mouth gag was 5.3 ± 1.1 minutes.

2. Mean time from extubation to response to auditory stimuli was 5.9 ± 2.0 minutes.

3. Ether concentration in the inspired mixture ranged from 0.67 to 1.89%, the mean (1.07 ± 0.21) being below ranges of flammability.

Siker, E. S., et al., *Pennsylvania M.J.*, 63:401-403,1960.

Tibial Fractures: Intramedullary Nailing

The entire antero-medial aspect of the tibia being subcutaneous, most fractures can be reduced without opening the fracture site. The operative procedure is simple, usually taking 30 to 45 minutes. For ununited or old fractures, it is always necessary to open the fracture site and to ream the medullary canal to accommodate the nail. Indications have been greatly broadened to include open and closed, as well as segmental and certain comminuted, shaft fractures. More recently, this technique has been applied to ununited tibial fractures both closed and infected.

The advantages of intramedullary fixation of tibial fractures are:

1. High incidence of bony union.

2. Early ambulation in most cases in a long-leg walking cast without crutches.

3. Patients may be ambulatory without casts, in most cases, in two or three months even though complete bony union is not shown on x-ray.

The disadvantages of this method are almost entirely attributable to two sources:

1. Poor selection in cases by persons unfamiliar with limitations of the method. The old principle of using the right operation on the right patient should always be kept in mind.

2. Technical difficulties occurring at surgery include driving the nail through the posterior tibial cortex, splitting the tibial shaft by introducing the nail too low, having the nail impinge in the intramedullary canal, recurvatum deformity due to bending the nail at the time of insertion, migration of the nail into the ankle joint, and use of an improper nail length.

The real catastrophes in the use of this method have been in cases where the nail has been removed too soon and refracture has occurred. The nail should be removed in clean, closed fractures in one year, in infected or previously ununited fractures in 18 months to two years.

Shanewise, R. P., *Northwest Med.*, 58:985-986,1959.

Coarctation of the Aorta and Patent Ductus Arteriosus

This combination of defects usually causes trouble early in neonatal life. The frequent presence of an intracardiac shunt adds to the likelihood of early congestive failure. An aggressive therapeutic approach permits at least half such infants to undergo intracardiac repair later. Although more than 40 infants with this combination of defects died in the past 10 years despite intensive medical therapy, 9 of 17 treated surgically survived the operation, 7 of the survivors showing gratifying improvement in physical, roentgenographic and electrocardiographic findings on re-examination. Age at time of operation ranged from 3 weeks to 19 months (median 8 weeks). Operation involved end-to-end anastomosis in all but 2. Duration of followup ranged from 14 months to 5½ years with a median of 2 years.

Although early repair has been criticized in the fear that growth of the anastomotic site would be inadequate, this follow-up study suggests that the anastomotic site does increase in size with growth, the blood pressure gradient between the upper and lower extremities being 20 mm. Hg or less in 6 of the 9 children studied.

Behrer, M. R., et al., *J. Pediat.*, 56:246-252, 1960.

Granuloma Annulare: Recognition in Childhood

Observation of 28 cases of granuloma annulare over the past 10 years have lead to the impression that the disease is becoming more frequent. Most cases occur at ages under 15. The lesions in many cases are detected accidentally. They are keloid-like, cutaneous nodules not causing pain or itching. They begin as a pinhead- or pea-size lesion extending peripherally, and rarely attain a size greater than that of a silver dollar. Later the center sinks and the adjacent skin appears atrophic and slightly pigmented. Ulceration does not occur. Additionally there may be solitary nodules the size of peas, these also located in the cutis. The theories that the condition is a specific chronic infectious disease and that there is some connection with tuberculosis have largely been rejected. Prognosis is generally favorable.

Koch, F., & Jantzen, H., *Monatsschr. Kinderh.*, 107:364-367,1959.

Heparinized Blood for Exchange Transfusion

To circumvent the deleterious effects of stored citrated blood, fresh heparinized whole blood was used in a series of 152 exchange transfusions in 115 infants, the indication being RH sensitization for 130, ABO incompatibility for 12, and "physiologic hyperbilirubinemia" for 10. It was gravity-collected in a siliconized system (20 mg. heparin being added per 500 cc. whole blood) and used immediately or within several hours without being refrigerated. At termination of the exchange transfusion (done through the umbilical vein in all but 5), 10 mg. protamine sulfate was given intramuscularly.

There were only 5 instances of bradycardia, all related to excessively rapid rate of exchange and/or elevated venous pressure and none persisting into the post-exchange period. The 3 episodes of bleeding from the umbilical cord and 2 of oozing from needle-puncture sites were not serious. The 1 instance of hematuria cleared in 2 days without residual renal damage. Coagulation studies in 9 infants showed that clotting and one-stage prothrombin times, though prolonged at the end of the exchange transfusion, were normal or nearly normal 15 minutes after administration of protamine sulfate. The 9 deaths in the series included 7 hydropic infants, giving a corrected mortality rate of 1.8%. Heparinized blood, with proper care and protamine sulfate, can be utilized for the care of erythroblastic infants. The following advantages of this anticoagulant have been demonstrated:

1. Reduction of mortality rate associated with exchange transfusion.
2. No deaths due to cardiac arrest during the procedure.
3. No prolonged bradycardia.
4. No irritability or tetany.
5. No lowering of hematocrit reading.

Bentley, H. P., Jr., et al., *J. Dis. Child.*, 99:8-17,1960.

Acute Torticollis

Analysis of data obtained in treatment of "wry neck" in 46 children showed a clear-cut history of trauma in 14, evidence of infection in 18, strabismus in 2, and no obvious cause in 15. No evidence supporting the concept of subluxation of cervical vertebrae as a cause or as a result of torticollis was found, all 46 children being successfully treated without traction. Observations in this series support the theory that static and statokinetic reflexes are involved in a vicious cycle of "pain-spasm-pain."

The grotesque appearance of

these children usually suggests the diagnosis on sight. The clinical picture is characterized by much pain, often associated with cervical muscle spasm. The child resists any change in body position that turns the head or puts tension on the involved cervical muscles, muscular spasm and more pain being precipitated by any attempt to move the head from the "position of comfort." Although the child may readily rotate the head so that the chin touches the shoulder on the side of the contracted muscle, rotation in the opposite direction is limited by exacerbation of the pain. This "chin to shoulder test" was positive in 45 of the 46 children. Examination should include neurologic evaluation to rule out central nervous system pathology. X-ray studies are indicated when there is a history of trauma or suggestion of cord or nerve root pressure.

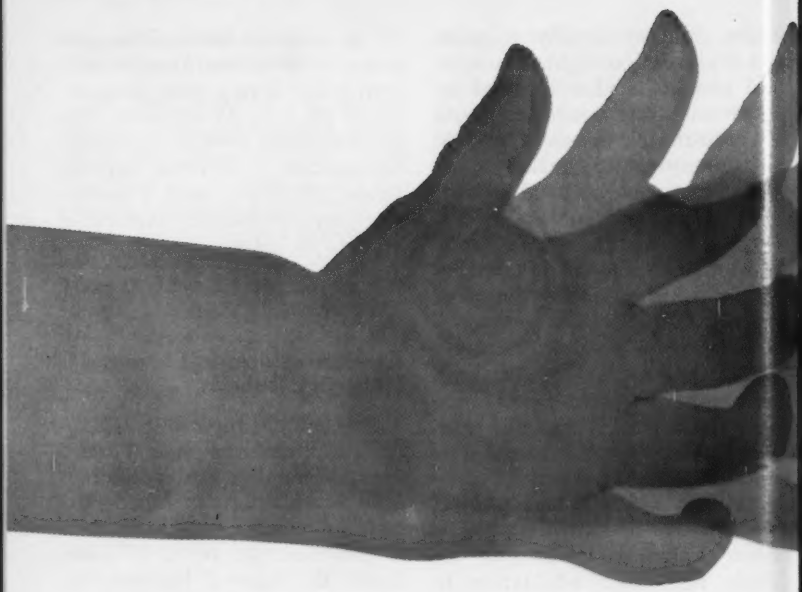
Treatment includes local heat to the neck, acetylsalicylic acid, and antibiotics as indicated. For ocular torticollis, one eye should be covered with a patch for temporary relief and the child referred to an ophthalmologist after termination of the acute episode. Children having glasses for correction of strabismus should be induced to wear them. For management of severe pain, codeine (15 to 30 mg. subcutaneously for children aged 6 to 12) is of great value. This was given to 29 of the first 38 children in this series, pain being relieved in 5 to 15 minutes. The last 8 children were given a muscle relaxant, 7 receiving meprobamate (Miltown) and 1 methocarbamal (Robaxin), with relief in 14 to 48 hours.

Korngold, H. W., *J. Dis. Child.*, 98:756-764, 1959.

Thrombocytopenic Purpura Following Rubella

This complication followed rubella in 2 children, ages 6 and 3 years 10 months. A third patient aged 7 probably developed purpura following a modified rubella infection. In 16 of 17 cases noted, the interval between appearance of rubella rash and purpura was 2 to 8 days. A sudden epistaxis was the first symptom in most cases, followed by purpura. Most patients were not prostrated, and pyrexia was not a feature. Very low platelet counts, some less than 3,000, occurred early. Usually purpura faded within a few days and platelet counts became normal in 6 weeks or less. Treatment consisted of transfusions of whole blood or platelets when needed, and administration of ACTH or cortisone. An allergic mechanism may be the cause of purpura following infections.

Ferguson, A. W., *Pediatrics*, 25:400-408,1960.



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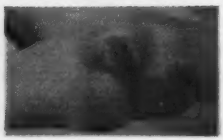

healed

39 of 44 infants with
diaper rash and **intertrigo**[1]

1. Litchfield, H. R.: New York State J. Med. 60:3253, 1960.

Regional Anesthesia

Saddle spinal anesthesia should be given in the sitting position so that the anesthetic solution will gravitate downward. A fine spinal needle, 22 or 24 gauge (preferably the latter) is utilized. A space at the level of the iliac crests or lower is preferred. Injection of a glucose weighted anesthetic solution is then done, the most recent being lidocaine (Xylocaine) with glucose in a 2 cc. ampule, 50 mg./cc. (the dose being 1 or 2 cc.). After the spinal injection, the patient should be placed in a reverse Trendelenberg position of 5 to 10° with acute flexion of the head on a folded pillow for 10 minutes. Blood pressure should be determined every minute until the spinal block is fully established, then every 5 minutes. A vasopressor is given as a continuous intravenous drip titrated against the blood pressure taken at one minute intervals until stabilized. Oxygen should be given intranasally at 5 to 10 liters/minute for hypoxia, hypotension, or nausea.

In pudenal block anesthesia, the ischial tuberosity should be palpated through the perineum. A 4-inch, 22 gauge needle is inserted perpendicularly to the skin to contact the medial and posterior aspect of tuberosity, a distance of 1 to 1½ inches, and 3 cc. of 1% lidocaine is deposited. With the index finger of the opposite hand in vagina or rectum as a guide, slide the needle past the medial aspect of tuberosity to depth of an additional inch, where it will lie in Alcock's canal on the near side of the sacrospinous ligament, and deposit 5 cc. of 1% lidocaine. The needle is then advanced through the sacrospinous ligament for a distance of ¼ inch, and 5 cc. of 1% lidocaine is deposited. The block is done bilaterally.

Blocks are not effective sooner than 5 minutes and may require 15 minutes. The perineum should be tested to needle prick and relaxation of perineal muscles noted. A 2% lidocaine solution does not increase the number of effective blocks, but does increase the possibility of reactions due to overdosage. Hyaluronidase does not increase the number of effective blocks, but does shorten the anesthetic time. Added epinephrine (1:100,000) prolongs anesthesia time.

Kreul, W., *Wisconsin M.J.*, 59:370-373,1960.

Incompetent Cervix of Pregnancy: Surgical Closure

Within the past few years a new clinical entity, cervical incompetence, has been described. This condition tends to late abortion or premature labor, the usual cause being trauma from forceful dilation as in difficult delivery. A history of normal pregnancies, repeated abortions or premature deliveries after spontaneous rupture of the membranes, no cramps, and rapid and complete emptying of the uterus, should be suspect. Diagnosis may be confirmed in the nonpregnant patient by cervical canal patency allowing easy and painless insertion of a No. 7 Hegar dilator, in the pregnant patient by finding the cervix effacing and dilating between the 14th and 26th weeks of gestation.

Treatment consists of closing the gaping internal os, in the nonpregnant patient by means of the Lash cervical repair operation and during pregnancy by the Shirodkar operation or a modification. Use of a ¼-inch nylon tape suture circumscribing the cervix at the internal os and anchored anteriorly by a shallow bite into the cervix, the cut ends 2 inches long for easy identification and removal at 39 weeks, has been advocated. As this procedure is a minor one and can be done under local infiltration anesthesia, it may be repeated at future pregnancies. Although incompetent cervix is uncommonly encountered and probably is responsible for a very small percentage of all abortions and premature deliveries, surgical treatment during pregnancy is rapid, not traumatic, almost bloodless, and can be done under infiltration anesthesia. Heavy, nonabsorbable suture material should be used to prevent dissolution, and as it is not associated with gross tissue reaction, may be safely repeated with future pregnancies. Salvage rate may be 80%.

Weisse, H. A., *Wisconsin M.J.*, 58:465-466,1959.

Management of Breech Presentation

External version is advocated by many if breech presentation is recognized prior to the onset of labor. If version is to be done, the attempts should begin at the 32nd week, and be repeated whenever the fetus returns to its original position. Eight weeks preterm, 10% would require this manipulation; if not disturbed, all but 3% will spontaneously rectify to the vertex. The final success rate in external version is some 70% in primigravidas, 90% in multigravidas; fetal mortality of not less than 1% results from premature separation of the placenta, prolapsed cord, and

premature labor.

Of 100 term-breeches, 58 were primi- and 42 multi-gravida. Cesarean section was done in 10. Of the 90 spontaneous deliveries, fetal mortality was 2%—one in a primigravida, secondary to anoxia, in the other a stillbirth from a prolapsed cord with ruptured membranes prior to labor in a multipara. Of the 10 labors terminated by section, 8 were primi- 2 multi-gravida; in all 10 there was no engagement prior to labor and little or no descent in a trial of labor (average 10 hours, with cervical dilation to 6 cm). Average fetal weight was 8 lbs. (extremes 7 lbs., 5 oz. and 10 lbs., 2 oz.). Fetal mortality was zero.

Induction in patients likely to deliver vaginally is seldom acceptable, and every effort to preserve the amnionic sac until completion of the first stage to decrease cord prolapse, is mandatory. Analgesics during labor should be adequate for relaxation and to set the stage for completion with pudendal block. When perineal distension begins, a generous episiotomy should be done, and the baby allowed to deliver to the umbilicus; then, instead of body traction in delivery of the head, a guided, gentle delivery with Piper forceps should be done. If in the second stage uterine contractions weaken and the breech is at or almost to the perineum, intravenous infusion of oxytocin 1:1000 dilution will serve well.

During the labor, fetal heart tones should be followed closely. With the incomplete breech, prolapsed cord is 20 times more prone to occur than with the frank breech. If suspicious, immediate vaginal examination should be done; if confirmed, immediate delivery should be done by method best suited to the stage. Post-delivery inspection of maternal soft tissues and fetus for injuries is routine.

Doolittle, H. H., *Nebraska M.J.*, 45:420-421, 1960.

Photos used with patient's permission.

How new **Dianabol** rebuilt muscle tissue in this underweight, convalescent patient

Patient was weak and emaciated before Dianabol. R. C., age 51, weighed 160 pounds following surgery to close a perforated duodenal ulcer. His convalescence was slow and stormy, complicated by pneumonia of both lower lobes. Weak and washed out, he was considered a poor risk for further necessary surgery (cholecystectomy). Because a conventional low-fat diet and multiple-vitamin therapy failed to build up R. C. sufficiently, his physician prescribed Dianabol.

Patient regains strength on Dianabol. In just two weeks R. C.'s appetite increased substantially; he had gained 9½ pounds of lean weight. His muscle tone was improved, he felt much stronger. After 4 weeks, he weighed 176 pounds. Biceps measurement increased from 10" to 11½". For the first time since onset of postoperative pneumonia, his chest was clear. Mr. C.'s physician reports: "He tolerated cholecystectomy very well and one week postop felt better than he has in the past 2 years."

Short Umbilical Cord Complicating Elective Oxytocin Induction

A patient, aged 26, pregnant for the fourth time, had had 3 previous spontaneous vaginal deliveries at term. The antepartum course in the fourth pregnancy was uneventful and results of physical examination and routine laboratory tests were within normal limits. The baby seemed of term size and was in vertex presentation. The condition of the cervix was favorable for induction of labor. Oxytocin was given to induce labor 2 days after the expected date. Labor began and intensified with increasing dosage of the drug, the fetal head descending to station zero with each contraction. Then there was no further descent in 2½ hours and the fetal heart rate slowed precipitously. Oxytocin was discontinued, contractions stopped, and the fetal heart rate increased. When oxytocin was tried again a day later, contractions resumed and the fetal heart rate dropped again. At Cesarean section it was observed that the umbilical cord was short, a complication that might not have been discovered in time to save the baby's life if it had been assumed that failure of delivery was because the patient was insensitive to oxytocin, as many patients are.

Montague, C. F., *California Med.*, 93:38-39, 1960.

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Doctors and the Law

CHARLES J. FRANKEL, M.D., LL.B., *Editor*

►*Would doctor be guilty of malpractice, if when unable to detect fetal heart tone in fifth month of pregnancy, he told patient her child was dead?*◄

This question was before the U.S. District Court for the Eastern District of Louisiana in *Morgan* vs *Aetna Casualty & Surety Company,* 185 F. Supp. 20 (1960). Plaintiff consulted doctor in second month of pregnancy. About two months later plaintiff suffered from slight bleeding and cramps in the uterus but this condition soon cleared up. When plaintiff was in fifth month of pregnancy, doctor's attempts to detect fetal heart tone were unsuccessful. According to doctor's testimony, he told plaintiff he was concerned about this inability to establish definitely that fetus was still viable and told her to return in a week when tests would be made if fetal heart tone was not then audible. According to plaintiff's testimony, doctor told her that her child was dead and she became distraught and hysterical and has suffered emotional maladjustment since that time because of doctor's inaccurate information. Plaintiff put herself under care of another doctor and, in course of time, had normal delivery of normal child.

Expert witness for plaintiff testified that no obstetrician, exhibiting required degree of skill, care and judgment, would have told plaintiff her baby was dead when he was unable to detect fetal heart tone at time in question. However, doctor was not guilty of malpractice because plaintiff's statement that he told her that baby was dead is not supported by the evidence. Doctor was concerned when he could not detect fetal heart beat and he communicated his concern to plaintiff. His concern was obviously based on fact that plaintiff had previously aborted and had had, during this pregnancy, bleeding and cramps. The Court said that truth of matter was that plaintiff was in highly emo-

tional state common to pregnant women and doubtless jumped to conclusion that child was dead from what doctor said. However, it is clear that he did not intend to convey that impression; he merely wanted to advise her of her condition and of his concern, which, as a doctor, he was required to do. But, considering plaintiff's emotional state, he should, perhaps, have been more guarded in his statements.

►*Does patient, by testifying in detail as to injury to his wrist, surgery by doctor and condition of wrist following operation, waive privilege so that doctor may testify as to the operation, its nature, procedure and results?*◄

The Supreme Court of North Carolina passed on this question in *Capps* vs *Lynch*, 116 S.E. (2d) 137 (1960). Plaintiff in a personal injury action arising out of an automobile accident testified in detail as to wrist injury suffered in accident, surgery and removal of lunate bone by his doctor and the wrist's condition after the operation. Some months prior to the accident, plaintiff had consulted another doctor about a pain in his wrist. This doctor diagnosed pain as arthritis. However, he did not x-ray the wrist to determine whether plaintiff was suffering from arthritis or osteochondritis and thus could not say whether there was any deterioration or absorption of the lunate bone at that time. Defendant wanted to call, as witness, doctor who treated plaintiff's wrist after accident for purpose of determining whether plaintiff had pre-existing ailment in his wrist. Plaintiff's objection that allowing doctor to testify would violate the privileged communications statute was sustained by the trial court.

Section 8-53 of the North Carolina Statutes provides: "No person, duly authorized to practice physic of surgery, shall be required to disclose any information which he may have acquired in attending a patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon. . . ." The Court said that the privilege, which is purely statutory, belongs to the patient alone and can be waived by him and cannot be taken advantage of by any other person. Since the North Carolina statute does not require express waiver, patient may waive the privilege by implication. A patient may waive his privilege in a personal injury case by testifying to the nature and extent of his injuries and the doctor's examination and treatment. Whether such testi-

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Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲Deprol▲

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mony by patient constitutes a waiver must be determined from facts of particular case. A patient who testifies as to own physical condition or his injuries or ailment, without going into detail and without referring to communications made to his doctor, does not waive the privilege. However, if the patient goes into detail regarding nature of his injuries and either testifies to what the doctor did or said while in attendance, or relates what he communicated to the doctor, privilege is waived and adverse party may question the doctor. By voluntarily testifying with respect to the operation, its nature, procedure and results, plaintiff waived his privilege and defendant should have been allowed to call doctor who treated plaintiff after the accident as a witness.

►*Can hospital be held liable for injuries suffered by mentally disturbed patient who fell three stories from bathroom window to ground while wandering around unattended?*◄

This question was passed on by the Court of Appeals of Georgia, Division No. 2, in *Misfeldt* vs *Hospital Authority of the City of Marietta,* 115 S.E.(2d) 244 (1960). Doctor had provisionally diagnosed patient's condition as paranoid schizophrenia. When he called defendant hospital's admissions clerk to arrange for room for patient, he did not directly inform her of this diagnosis, but he did tell her patient was mentally disturbed and that he wanted her admitted to the "psycho room." The clerk relayed the message to the supervisor of admissions. One of the hospital's three psycho rooms was vacant at the time of the call, but the supervisor told the clerk none was available because the rooms were sometimes used as private rooms and she planned to assign the vacant one to child of former nurse who was being admitted for tonsillectomy the next day so that mother could spend night with the child. Doctor then asked for private room and was told none was available, although the psycho room was still vacant. Doctor said that under the circumstances patient would have to be admitted to four bed ward.

Patient's husband brought her to hospital and he brought, for hospital, doctor's written instructions for drugs on which he had noted that patient was ambulatory. Psychiatrist testified for plaintiff that one indication of mental disturbance is a glazed appearance of the eyes. Number of persons who saw patient shortly before admission and her husband, who stayed with her for hour after admission, testi-

fied to her strange appearance and especially her eyes' glazed appearance. Hospital employee, who conducted patient to bed assigned, testified that she seemed frightened or highly nervous and had a glary look in her eyes. Because of this attendant felt patient should not be left alone, she stayed until nurse arrived; she commented on patient's appearance to nurse. Shortly after her husband left, patient, who was unattended, walked down hall to bathroom and, after locking door, raised window, jumped to ground three stories below and sustained severe injuries. There was testimony that hospital regulations required that someone be with mentally disturbed patients at all times.

The Court said that there was evidence from which a jury could find that defendant hospital had notice of patient's mentally disturbed condition and it cannot be said, as a matter of law, that hospital was freed from responsibility because notice was not written in doctor's instructions brought to it by patient's husband. The evidence as to patient's appearance on arrival was sufficient to make jury issue as to whether trained staff members should have recognized her irresponsible condition. Despite her appearance, they did not keep constant watch over her but allowed her to wander away by herself. Doctor's notice to hospital that patient was ambulatory had reference to her physical, not her mental, condition and should have conveyed to hospital attendants, who had notice of her mental disturbance that she, a mentally disturbed person, could get up and walk about unless prevented by attendants from doing so. Evidence in record was such that question of whether or not hospital was negligent should have been submitted to jury.

►*Shortly before he took witness stand in his defense, jail attendant gave defendant in murder case tranqualizers, effects of which were not known to defendant. Jury found defendant guilty and imposed death penalty. Is defendant entitled to new trial?*◄

This issue was before the Washington Supreme Court in *State* vs *Murphy*, 355 P. (2d) 323 (1960). Defense counsel had decided that defendant in murder case should take witness stand. At 8:30 of morning on which he was to testify, he complained of severe cold to fellow prisoner who acted as medical trusty under jail physician's supervision. Trusty gave defendant pill containing Equanil which defendant took. At about 9:00 a.m., trusty gave defendant two pills

containing Trancopal, one of which he saw defendant take. Trusty told defendant these two pills were tranquilizers, but he had never before taken a tranquilizer and did not know their effect. Defendant took stand at 10:00 a.m. He testified as to his life prior to commission of crime and as to commission of crime itself; testimony was given in cool and somewhat lackadaisical manner. Jury found defendant guilty and imposed death penalty.

Defendant contended he was entitled to new trial because, although tranquilizers did not affect his testimony's content, it did affect manner in which given and this manner might well have influenced jury to impose death penalty. Defendant's court-appointed counsel testified that, in all pre-trial discussions, defendant appeared extremely distraught and nervous about case and that manner in which he testified was such complete change as to be beyond comprehension at time he testified.

The Court said that jury has full and complete responsibility, in first degree murder case, of determining whether death penalty will be imposed and, in such determination, significant consideration may well be jury's evaluation of defendant's attitude toward his crime. If death penalty has been imposed, new trial should be granted upon defendant's showing of reasonable possibility that his attitude, appearance and demeanor, as observed by jury, have been substantially affected by circumstances over which he had no real control. Defendant here has made such a showing; i.e., it reasonably appears that his appearance, attitude and demeanor may have been influenced by tranquilizers, administered under at least semblance of authority or approval of public officers having custody over him, and apparently without his being aware of their probable effect.

►*Is doctor negligent if, when patient suffers injury in first of electric shock treatments, he fails to give patient relaxant drug prior to subsequent treatments?*◄

The New York Court of Claims passed on this question in *Foxluger* vs *State*, 203 N.Y.S. (2d) 985 (1960). Electric shock therapy was instituted for patient in state mental hospital whose case was diagnosed as involutional psychosis melancholia. Although patient suffered shoulder injury in first treatment, therapy was continued and, in final treatment, patient suffered impacted fracture in neck of left humerus.

Plaintiff contended that doctor

in sulfa therapy... RELEASE YOUR PATIENT FROM Q.I.D. DOSAGE

just one tablet of Midicel provides continuous, effective blood levels for 24 hours

Because many patients need take only 1 tablet daily, therapy with MIDICEL is convenient and economical. It is also advantageous since the possibility of omitted doses is reduced. Rapidly absorbed and slowly excreted, MIDICEL assures dependable bacteriostatic action in urinary tract infections, certain respiratory infections, bacillary dysenteries, as well as surgical and soft-tissue infections caused by sulfonamide-sensitive organisms. And with MIDICEL, there is little likelihood of crystalluria because of its high solubility and low dosage.

MIDICEL (sulfamethoxypyridazine, Parke-Davis), 3-sulfanilamido-6-methoxypyridazine. Tablets of 0.5 Gm.; Suspension, each cc. containing 50 mg. of sulfamethoxypyridazine as the N¹acetyl derivative. *Indications:* Gram-negative and gram-positive infections such as urinary tract, respiratory, and soft-tissue infections and bacillary dysenteries. *Dosage:* Orally once a day until asymptomatic for 48 to 72 hours. Adults: — 1 Gm. initially, followed by 0.5 Gm. daily thereafter or 1 Gm. every other day. In severe infections, not to exceed 2 Gm. the first day, then 0.5 to 1.5 Gm. daily according to weight of patient and severity of infection. Children: — 30 mg. per Kg. the first day, then 15 mg. per Kg. daily. In severe infections, 50 to 50 mg. per Kg. initially, then 25 mg. per Kg. daily. Total dose in children, however, should not exceed lower dosage limits for adults. *Precautions:* Continue daily doses higher than 0.5 Gm. no longer than three to five days without checking for blood levels above therapeutic range. Maintain adequate fluid intake during therapy and for 48 to 72 hours afterward. Until further definitive information is available, MIDICEL, in common with all sulfonamides, is contraindicated in the premature and newborn infant. Contraindicated in patients with a history of sulfa sensitivity. MIDICEL is not recommended for meningococcal infections. *Side Effects:* Anorexia and lassitude may occur as may reactions such as drug fever, rash, and headache, all of which are indications for discontinuing the drug. Leukopenia has been reported. Periodic blood counts are advised. Patients with impaired renal function should be followed closely since excessive accumulation may occur.

AVAILABLE: Quarter-scored tablets of 0.5 Gm., bottles of 24, 100, and 1,000. 60061

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was negligent, after patient suffered injury in first treatment, in failing to give her relaxant drug prior to subsequent treatments. At time treatments were given, some doctors were using relaxant drugs as routine procedure when administering electric shock treatments; however, many other doctors were not using relaxant drugs because they feared danger of unknown reaction to drugs more than probability of injuries from treatments. The Court said that there is no authority requiring doctor to use what some doctors consider best method if the method adopted is one accepted by respectable medical authority. Medical opinion and medical text books differ on the subject. Honest acceptance of one field of respectable medical opinion, though other medical opinions may differ, does not constitute negligence simply because result in particular case was bad.

►*Is property of association, general purpose of which is improvement of medical education, exempt from taxation as property used for public educational purposes, even though association is not a school and property is not directly devoted to classwork?*◄

This question was before the Illinois Supreme Court in *Association of American Medical Colleges* vs *Paschen*, 160 N.E. (2d) 763 (1959). General purpose of plaintiff association, a non-profit corporation, is improvement of medical education in United States. Its monetary support comes from member medical schools throughout country. Plaintiff's real property involved herein is used solely in conduct of its operations for improving educational standards at medical schools and activities incidental thereto. Plaintiff publishes journal and directory showing admission requirements and other information about medical schools; compiles student information to assist medical schools' development of instructional programs; sponsors admission tests and teaching institutes; evaluates students' intellectual and personality characteristics and their relation to scholastic and professional performance; performs placement functions; appraises curricula of medical schools; and, through its inspection and liaison committee, joins in accrediting of all medical schools in United States.

Plaintiff argued its real property was exempt from taxation under chapter 120, paragraph 500, of the Illinois statutes which exempts from taxation all property "used for public school, college, seminary, university or other public educational purposes."

Defendant contended that provision exempts only "schools" from taxation. The Court said that taxable status of property is not determined solely or necessarily by whether owner or operator is a school. Mere fact that class instruction in useful subjects is conducted, and, thus, that "school" of some kind is maintained, is insufficient. And, on the other hand, it is not necessary, for exemption, that classroom instruction be given on property. Exemption applies to property used for "public educational purposes" as well as to that used for school, as such. It is evident that this is proper construction of statute because statute, before general provisions quoted above, exempts all property of schools used exclusively for school purposes; by adding the words quoted above, legislature manifested intention to exempt property which, although not used as school, is used for school purposes.

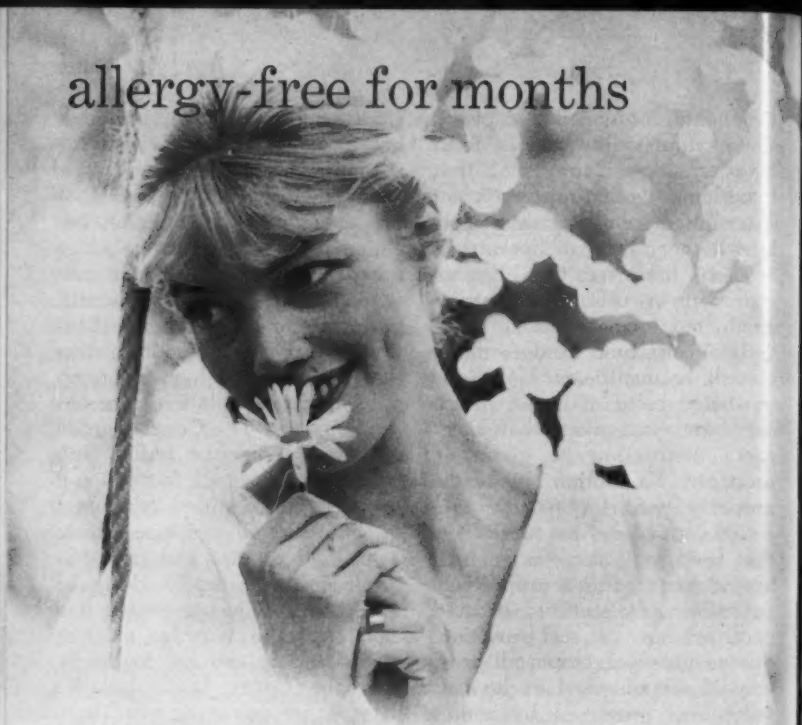
Defendant also argued that property was not exempt because not used exclusively for school purposes. Defendant contended that functions plaintiff performs for its member institutions are primarily administrative and statistical ones having only incidental relation to teaching activities. The Court pointed out that residence halls, club houses and baseball, football and bowling facilities used as adjunct of educational processes have been held exempt and said that programs realistically designed to further intellectual instruction can hardly be accorded a lesser status. There can be no doubt, said the Court, that plaintiff's services in improving educational standards meet the statutory test for exemption.◀

Acute Head Injuries: Results of Heroic Treatment

Techniques applied included tracheostomy in 36 (16 are alive and 20 dead), hypothermia in 32 (11 are alive and 21 are dead), and lobectomy in 16 (6 are alive and 10 are dead). Approximately half of the surviving patients are seriously handicapped, and only 9 lead relatively normal lives. Results indicate that heroic procedures should be reserved for younger individuals unless some specific indication demands their use in older people. Increased emphasis should be placed on nursing care, supportive therapy, the administration of urea to control cerebral edema, and oxygen therapy, especially in those over age 50.

Walker, A. E., *Am. Surgeon*, 26:184-188,1960.

allergy-free for months



with a one-week course of daily injections

Whether it is pollinosis, rhinitis due to other inhalants, allergic asthma, asthmatic bronchitis in children, eczema, or food sensitivity . . . regardless of the number or nature of the offending allergens . . . a daily injection of Anergex for 6 to 8 days usually provides prompt relief that persists for months in most patients.

Anergex is nonspecific in action. Its effectiveness against most common allergens eliminates skin testing and long drawn-out desensitizing procedures. In contrast to the antihistamines and other drugs that provide only temporary symptomatic relief, Anergex induces a prolonged allergy-free state.

Marked improvement or complete relief has been reported in over 70 per cent of more than 5,000 patients*. Anergex appears more effective when given during exposure to the offending allergens. Relief is prompt; the patient "often feels better by the time he has had 3 or 4 doses"*. Anergex is safe; no systemic reactions or side effects have been reported.

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ANERGEX®

the new concept for the treatment of allergic diseases

MULFORD COLLOID LABORATORIES MULFORD **PHILADELPHIA 4, PENNSYLVANIA**

The Doctor Builds His Estate

Prepared monthly for the readers of Clinical Medicine by the Research Department of Bache & Co., 36 Wall Street, New York 5.

►*These monthly articles point out one method by which the physician may overcome the handicap imposed upon him by taxes on the bulk of his income at normal rates, as opposed to the capital gains tax open to many business men. One solution is systematic investment of current income in securities.*◄

Recent government figures showing that the recession is bottoming out came as no surprise to the stock market. Wall Street has been anticipating an upturn since the beginning of the year. Thus, it is time to turn our sights on the somewhat neglected cyclical issues. Cyclicals, of course, are companies that move in rough accordance with the general economy and are thus unable to weather the downturns as well as the non-cyclicals (foods, leisure-time companies, service companies). By the same token, however, once the upswing begins the cyclicals can show vast earnings improvement over the previous poor year, while the "recession-proof" companies continue their steady, but generally unspectacular, gains.

Thus, the goal is to catch such a stock at the bottom of a cycle and ride it upwards once the profit picture turns brighter. Since the market usually discounts brighter prospects in advance, some of the cyclicals have already risen to levels making them unattractive for present purchase. However, we have selected four companies which are reasonably priced with respect to earnings and dividends and which are candidates for further price appreciation as the upturn becomes a full blown reality.

Anaconda

Our first company is Anaconda, the second largest copper producer in the world.

Before perusing the company, it would be advisable to look into the copper industry, in gen-

eral. Today, in copper, the supply or the capacity to produce metal continues to exceed demand. This should not now startle the investing public, since it has been part of the economics of the industry since 1956 and we see no real change until after 1965. This does not mean to imply that investors should avoid copper equities, but rather to create an awareness of the problem and the risk involved because of the demand/supply effect on metal prices. If they are timed properly, copper stock purchases can produce a substantial capital appreciation, we believe.

Anaconda, in addition to being the world's second largest copper producer, is a sizable processor of other metals, particularly uranium, aluminum and zinc and is also the leading domestic fabricator of copper and allied products. Copper reserves are believed to be the world's largest, and while costs at U. S. mines are relatively high, both of the large Chile mines are low cost operations.

The company accounts for about 15% of free-world mine output although it owns over 40% of estimated world reserves of the metal. The company is also the leading U. S. fabricator of nonferrous metals and is an important producer of uranium, aluminum, zinc, lead, silver and manganese. Close to half of mine output is used in the company's fabricating operations; most of the other shipments go to Europe.

Of the 490,200 tons of copper produced in 1959, some 76% came from Chile, 18% from U. S. mines (14% Montana and 4% Nevada) and 6% from Mexico. Fabricating subsidiaries are the wholly-owned Anaconda American Brass with nine plants and the 71%-owned Anaconda Wire & Cable with eight plants. The uranium mine and mill (3,000-ton-a-day capacity) are in New Mexico. Aluminum facilities consist of a 62,500-ton reduction plant in Montana and five fabricating mills making sheet, plate, rods, tubing and foil. Other interests include custom smelting and an iron ore property in Canada.

Ore reserves at the Chuquicamata pit and El Salvador underground mine in Chile are estimated at one billion tons (1.6% copper) and 375 million tons (1.5% copper), respectively. Total costs at Chuquicamata averaged 17.3¢ a pound; costs at El Salvador are expected to compare favorably with these when maximum efficiency is achieved. Costs at U. S. mines are much higher than in Chile.

A 10% cutback in copper production at the Chilean and U. S. mines reduced Anaconda's out-

ANACONDA			
Price	53⅛	Capitalization	
Dividend	$2.50	Long-Term Debt	$5,400,000
Yield	4.7%	Common Stock	10,715,000 shs.
Traded	N.Y.S.E.		

put to an annual rate of about 500,000 tons. This curtailment was designed to eliminate part of excess world production of copper and thus remove pressures on prices. Extensive development work is planned at optioned beryllium ore claims in Nevada.

Capital outlays in 1961 are expected to decline to $35 million from the estimated $39 million in 1960. Cash flow depreciation (which totaled $42 million in 1960) should cover these outlays and debt retirements of $9.6 million. Capital outlays of $700 million in the postwar years have been largely financed internally although borrowing was sizable and $85 million of stock was sold in 1957.

It is our view that Anaconda's present price continues to reflect the lower 1960 earnings and the prospects of a possible lower price for copper. Earnings for 1960 equaled $4.30 per share against $5.53 in 1959. If it were not for strikes at both Chilean properties and the after-effects of the 1959 strike at the company's domestic operations, earnings could have been in excess of $6.00 per share. For 1961, we continue to look for net of $5.00 or more at copper prices as low as 28¢ per pound. At 30¢ copper, with uninterrupted production, we estimate Anaconda would be able to earn at least $6.50 per share. Aluminum operations, however, should begin to contribute to earnings in 1961 for the first time, adding about 20¢ a share to overall results.

The present $2.50 dividend is well protected and provides a yield approximating 5%. With improved business conditions in the latter part of 1961 and 1962, some dividend liberalization is likely. The company's financial condition continues strong.

Continental Steel Co.

Our second company for perusal is Continental Steel Co., a Midwest steel producer that we feel bears looking into. Operations are located in Kokomo, Indiana and the company specializes primarily in bar and wire products, although it also turns out galvanized sheets for the farm trade. Over the years,

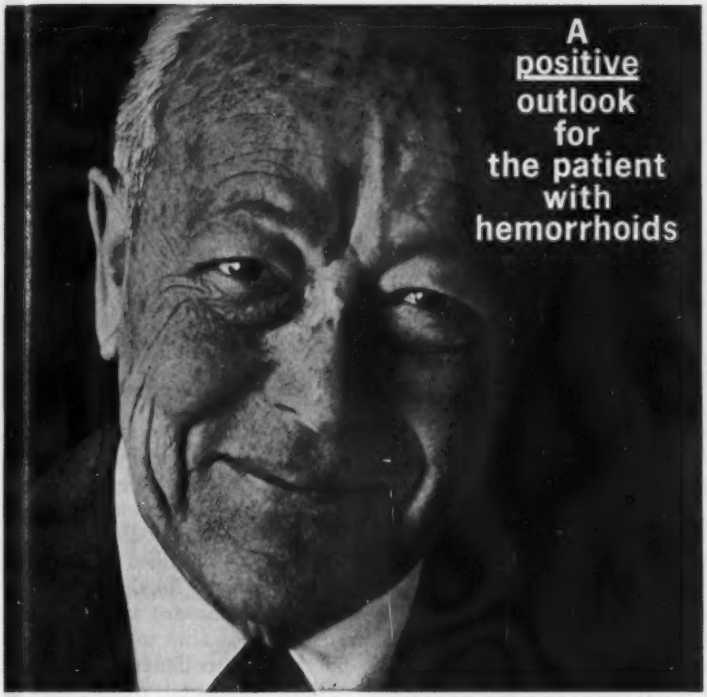
the company has considerably improved its product mix, and now derives a substantial proportion of sales and earnings from wider profit margin products for the building and construction industry as well as general manufacturers.

Continental is a semi-integrated company making a varied line of wire mill products; some galvanized sheet is also made and fabricated into culverts and roofing. In recent years, output of high-margined lines has been emphasized, particularly products for concrete reinforcement and industrial uses. Production of high-carbon wire has also been initiated. Merchant trade items which are chiefly sold to farmers are still a leading line, although non-merchant products now account for well over half of total volume. The major merchant trade lines are fence (poultry, other farm and ornamental) barbed wire, fence accessories, gates, wire fabric, nails and steel roofing and sidings.

Chain link fences are also made along with various industrial wire products (sold to automobile parts, appliance and a wide list of other manufacturers), concrete reinforcing bars and wire mesh (in which facilities have been sharply expanded). The company's five open-hearth furnaces at Kokomo, Indiana, have an annual capacity of 420,000 tons. Iron and steel scrap are the principal raw materials although some purchased pig iron is used.

Going back over the record, Continental Steel stood out in the 1958 recession, when earnings actually increased to $3.70 per share from the $2.67 a year earlier, whereas the rest of the steel industry fared rather poorly. It is interesting to note that, although last year's sales volume declined to the 1958 level of about $46 million, margins widened substantially and earnings were up to $4.19 per share. In 1959, sales and earnings had established peak levels, due in no small part to the fact the Continental was not strike-bound and thus operated at virtual capacity throughout the year. Last year's earnings indicate a profit margin of 9.4% on sales, as against an industry average of under 6%. This year started off at a slow rate, but should gradually improve and result in quite satisfactory profits.

Quarterly dividends have been paid without interruption since September, 1936, and have shown a generally rising trend. While the regular rate is conservative, the company pays very liberal year-end extras, and has split the stock as well as paying a stock dividend. Financial position is very strong, with a current ratio of almost 7 to 1 at



Hemorrhoids alone can cloud a patient's outlook, but when they are aggravated by constipation, his difficulties are compounded. One way to establish a more positive outlook is to use new Mucilose-Super to promote easy passage of normal evacuations without rectal irritation. This anticonstipation agent combines two gentle physiologic actions. Superinone®, the remarkably efficient surfactant, penetrates and softens fecal mass, while bland, emollient Mucilose absorbs water and increases stool volume—for mild reflex stimulation of the bowel. New Mucilose-Super usually acts within twenty-four hours or sooner, does not interfere with digestion or vitamin absorption or provoke electrolyte imbalance.

Dosage: 1 or 2 teaspoons, once or twice daily, well stirred in a full glass of water, milk or fruit juice, followed by another glass of liquid.

New Mucilose-Super is available in cans of 4 and 16 oz.

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CONTINENTAL STEEL CO.

Price	45⅞	Capitalization	
Dividend	$2.40	Long-Term Debt	$1,400,000
Yield	5.3%	Common Stock	1,032,802 shs.
Traded	N.Y.S.E.		

year end 1960, while cash items and marketable securities were more than twice current liabilities. Capital structure is clean and simple, with only $1,400,000 of long-term debt preceding the 1,032,802 shares of common stock outstanding.

Over the long term, expansion of concrete reinforcing lines and industrial wire products increases the company's profit potential. Earnings of this semi-integrated producer probably will be more stable than other steel companies as a result of its large position in agricultural wire products, but sharp changes in scrap prices can result in fairly wide fluctuations at times.

Continental is a good example of a well-managed smaller steel producer that is showing a consistently improving record, due to plant modernization and new products. It is highly complimentary to the management that the improvements have been effected with very little outside financing, and yet the company has been able to maintain a very liberal dividend policy, increase its financial strength and add to the per share equity. In summation, Continental offers very sound value for capital appreciation, while providing a better-than-average yield.

Northwestern Steel & Wire

Another of the smaller steel companies that merits attention is Northwestern Steel & Wire, a company which has a number of plus factors. Specifically, while the company does not make every type of finished steel, all its operations are in one plant, so that it is able to ship carload lots of miscellaneous products where desired. While foreign competition has hurt most wire companies, NSW has a geographical plant advantage, being located in the middle of Illinois.

In 1954, wire products accounted for over 80% of Northwestern's $35 million sales. Last year, sales totaled $67 million, but wire products had fallen to under 50% of the total, with the balance coming from items since added. The more important of the newer products include merchant bar mill products, accounting for 25% of last year's

For the irritable G.I. tract

Milpath acts quickly to suppress hypermotility, hypersecretion, pain and spasm, and to allay anxiety and tension with minimal side effects.

AVAILABLE IN TWO POTENCIES

MILPATH-400—Yellow, scored tablets of 400 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride.
Bottle of 50.
Dosage: 1 tablet t.i.d. at mealtime and 2 at bedtime.

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WALLACE LABORATORIES *Cranbury, N. J.*

sales and plates and structurals, which contributed 15%.

In fiscal 1960 capital expenditures were more than double those of the prior year, amounting to $3.2 million as against $1.5 million for 1959. During the ten-year period ended July 31, 1960, capital expenditures have amounted to $41.1 million. Charges to current year's operations to cover depreciation amounted to $2.3 million; depreciation charges for 1959 were $2.3 million. The major item in connection with the past year's capital expeditures was the purchase and installation of an additional finishing line on the 12-inch Merchant Bar Mill, which included run-in tables, a 380-foot hot bed, shears and take-off cradles. As a result of this addition, placed in operation in July, 1960, the annual rolling capacity of this mill is increased to 324,000 net tons from a previous capacity of 288,000 net tons. During the year, building additions were completed in connection with the 20-inch Structural and Plate Mill, the 12-inch Merchant Bar Mill and to the plant of Parrish-Alford Fence and Machinery Company, Inc., Northwestern's wholly-owned subsidiary, providing for additional floor space of well over 100,000 square feet.

During the first fiscal half of 1961, ending January 31, the rate of incoming orders and shipments followed the pattern which prevailed generally throughout the steel industry during this period. A significant factor to somewhat lower demand was the practice of many steel consuming companies to operate with minimum inventory positions.

The company noted in their second quarter statement that since the completion of that quarter, a seasonal increase in the demand for steel products was experienced. The company anticipates that improving weather and business conditions throughout the company's sales area will be reflected in an increase in new order rate as construction, agricultural and other steel consuming markets accelerate their activity.

Having completed this traditionally slow second fiscal period, the company still managed to earn a respectable 60¢ a share, with a 9.8% profit margin, one of the best in the industry. This brought six-month earnings to $1.35, up from 45¢ a year earlier, which included the strike-ridden October quarter. For the year ended July 31, 1961, we are estimating earnings of $2.90-$3.10 a share, up from $2.35, with further gains in sight for next year. NSW's biggest outlets are the construction and agricultural markets, both of which are show-

Northwestern Steel & Wire			
Price	29⅜	Capitalization	
Dividend	$1.00	Long-Term Debt	$5,400,000
Yield	3.3%	Common Stock	2,502 000 shs.
Traded	N.Y.S.E.		

ing seasonal signs of a pickup.

Capitalization is clean, with $5.4 million in long-term debt and 2.5 million shares outstanding, of which almost 80% are closely held. Annual dividends have been raised from 16¢ in 1955 to the current level of $1.00 and some further liberalization appears very possible. We recommend the shares for both moderate capital gain and reasonable income over the intermediate term.

United States Rubber Co.

Our final stock is United States Rubber Co. One of the Big Four domestic fabricators, U. S. Rubber usually derives about half of sales from tire lines. The company, which has completed the change in its management structure, is greatly increasing the number of owned retail stores expanding foreign operations and striving to develop and introduce new and wider-margined products.

Sales in 1960 were 1% below the record level of 1959. Although shipments of original equipment tires benefited from a 25% increase in passenger car production by General Motors, this was offset by the greater proportion of lower-priced tires made for compact cars and lower average selling prices on replacement tires. The latter factor, together with increased wage and crude rubber costs, caused margins to narrow, and pre-tax profits were down 14%. After lower taxes of 47.9% against 51.5%, a net loss of 37¢ a share as a result of writing off the Cuban properties and a 15¢ gain from the sale of an idle Fort Wayne plant, final net income also was 14% below that a year earlier ($4.44 vs. $5.30).

Sales for 1961 may be moderately below the slightly reduced $967 million of 1960. Downside factors will include an estimated decrease in automobile production by General Motors, the greater portion of smaller-sized tires produced, the depressed level of replacement tire prices (although there have been a few signs of firming prices) and curtailed demand for non-tire products because of the somewhat lower level of general business

!!!!!!

"Wine and stress"*

"Wine provides a mild but long-lasting relief from emotional tension."

The use of wine, especially in moderation, is as old as written history. Social scientists claim that no usage of any kind persists unless it serves an important function.

Stress Relief Studies—Recent research by Greenberg, Carpenter and Associates at Yale University's Laboratory of Applied Physiology, helps explain one reason for the popularity of wine in nearly all cultures and all nations for thousands and thousands of years.

It was found that as little as 3 ounces of a California Burgundy could lower the emotional tension index in normal humans exposed to controlled conditions of extreme stress.

The tranquilizing effect of wine appears to be greater and yet smoother than that produced by most other beverages, and perhaps safer than that of the usual synthetic pill.

Other Physiological Actions and Clinical Roles—The above is just one of the many interesting research studies now being conducted on the physiological effects of wine.

Based on recent findings, the modern Rx uses for wine—in convalescence, cardiology, urology, geriatrics—are discussed in "Uses of Wine in Medical Practice." Wine Advisory Board, 717 Market Street, San Francisco 3, California.

*Silverman, M.: 48th Quarterly Meeting, Soc. Medical Friends of Wine, Jan. 13, 1960.

activity. These factors may more than offset benefits from greater replacement tire sales, the growing number of company-owned retail stores and mounting foreign business.

The company, however, should be a long-term beneficiary of the underlying growth indicated in line with expanding use of rubber and the extension of non-tire activities.

Also, the compnay has diversified into some promising areas. U. S. Rubber has always been a big factor in rubber and canvas footwear, selling more than one million pairs of canvas and waterproof types of footwear each year. A new plastic stretchable overshoe ("Pack-a-way," in 5 sizes) offers interesting potentials. It is less expensive than other types of waterproof footwear and affords a saving to retailers because of the need for less storage space.

The textile division—a problem child 10 years or so ago—has been making marked progress in recent years. Today, 75% of the textile output is sold to outsiders compared with no sales 20 years ago. Volume, moreover, is currently seven times the total of 20 years ago. A growing market for some of the various synthetic yarns is offered in the carpet industry, where spun nylon is being used extensively.

The company has always enjoyed a large sales volume for its well-known "lastex" yarns, patents on which expired some years ago, although the trademark is still retained. A new improved elastic yarn covered with nylon, called "Vyrene" (a registered trademark), has been developed for use in swimwear, lingerie, sports clothing, support hosiery and home furnishings. While this new stronger and better elastic yarn will probably replace lastex, at least to some extent, it is expected rather to supplement and widen the market via new ones.

Some other new products include (1) Kralastic, a rubber and resin blend, now the leading plastic material for rigid plastic pipe and the No. 2 material in the overall plastic pipe market; (2) Royalite Plastic, which is aimed at the luggage market. The fast-growing market for this special type plastic is envisioned, with sales of this single product alone reaching $12-$13 million in nearby years. (3) Another interesting new product called "Expanded Royalite Plastic" is finding increasing acceptance in the small boat market, where the material is claimed to be stronger than marine plywood, marine aluminum and other reinforced plastics. (4) Another item pertaining to boats is called "Lamiflo" which is a flexible

UNITED STATES RUBBER CO.

Price	54
Dividend	$2.20
Yield	4%
Traded	N.Y.S.E.

Capitalization

Long-Term Debt	$155,000,000
Common Stock	5,745,000 shs.

rubber skin that reduces water drag on vessels by 50%. This new product is nearing the commercial stage. (5) Vibrin, which is a polyester resin used mainly for reinforced plastic boats, a field which grew 60% in 1959 and accounted for 40% of the total output of pleasure craft produced. (6) The new type Royalite Plastic Hose which is expected to attain a market potential of $12 million a year in mines, ships, forestry, etc. (7) Finally, a product called "Journal Seals" for freight cars approved by American Association of Railroads.

The department that comes up with these new products is the research department. U. S. Rubber—now in a five-year, $120 million research program—is understood to spend about $25 million annually on research and development, operating 22 other research branches in addition to the major research center at Wayne, New Jersey. Research and development outlays have risen 70% in the past five years.

As for the company's plantations, despite the significant advance in synthetic rubbers, it is still felt there will continue to be a need for U. S. Rubber's natural rubber plantations in Malaya. The Wayne research center operates the only rubber plantation in the U. S. (in a hothouse) with tropical conditions carefully simulated. Here, constant experiments are made with the different types of fertilizers, etc., to obtain the fastest and best rubber tree growth.

Approximately $32 million has been appropriated for capital outlay this year vs. depreciation of $25 million. During the past five years, $156 million has been spent and $200 million is planned for the next five years for new and improved facilities.

Summing up, U. S. Rubber offers the lowest multiple of earnings, of the Big Four Rubber companies (Firestone, Goodyear and Goodrich are the other three). Yielding around 4%, it affords the best yield among the Big Four. Finally, the stock sells at not much above book value. Stocks of the other three companies command premiums of 45% to 127%.◀

The Doctor and His Federal Income Tax

Prepared monthly for the readers of Clinical Medicine by Sydney Prerau, Director, the J. K. Lasser Tax Institute, Larchmont, New York

►*Be wary of resort ads implying tax deduction for costs*◄

The Treasury issues a warning to taxpayers to consider carefully the inferences of tax deductibility in advertisements of professional "seminars" abroad and in luxury resort areas. The programs for some of these "seminars" raise questions on their qualification for deduction as business expenses, particularly concerning the spouses of participants. The criteria for deduction of expenses for entertainment, travel and business trips — which are, in fact, vacations — is now rather closely defined although, Treasury adds, the Agent will, of course, consider the particular circumstances of a claimed deductible expense.

A recent case points up this warning: A physician was a Mediterranean cruise passenger on the S.S. Vulcania along with some 60 other physicians, their wives and relatives. The cruise was advertised by a travel agency as a seminar to be given by five professors affiliated with a university school of medicine. Although the university was not actually or officially a party to the seminar, and lecturers were not paid by the university, the lecturers received free passage. Doctors attending received a certificate signed by the director of postgraduate education of the medical school qualifying them for 25 hours postgraduate credit. Before embarking on the cruise, the physician wrote to the university concerning the "tax status" of the expenses of the seminar and received in reply a brochure from the travel agency stating that the cost "is a deductible expense when computing taxes."

The cruise lasted 18 days, with stops at various ports. Lectures were given at sea, and at ports. Some sightseeing was included

in the cruise as scheduled tours. Other sightseeing tours were taken by the doctor on his own. He deducted $1,881 on his tax return for "postgraduate refresher course." The Tax Court disallowed all but $232, holding the physician was primarily seeking a vacation, not learning. The Court stated:

"We find it impossible to believe that an extremely busy doctor would spend approximately a month in obtaining information which could have been obtained from the same faculty in four days and at a fraction of the cost of the cruise." (Hoover, 35 TC 60, 1/18/61).

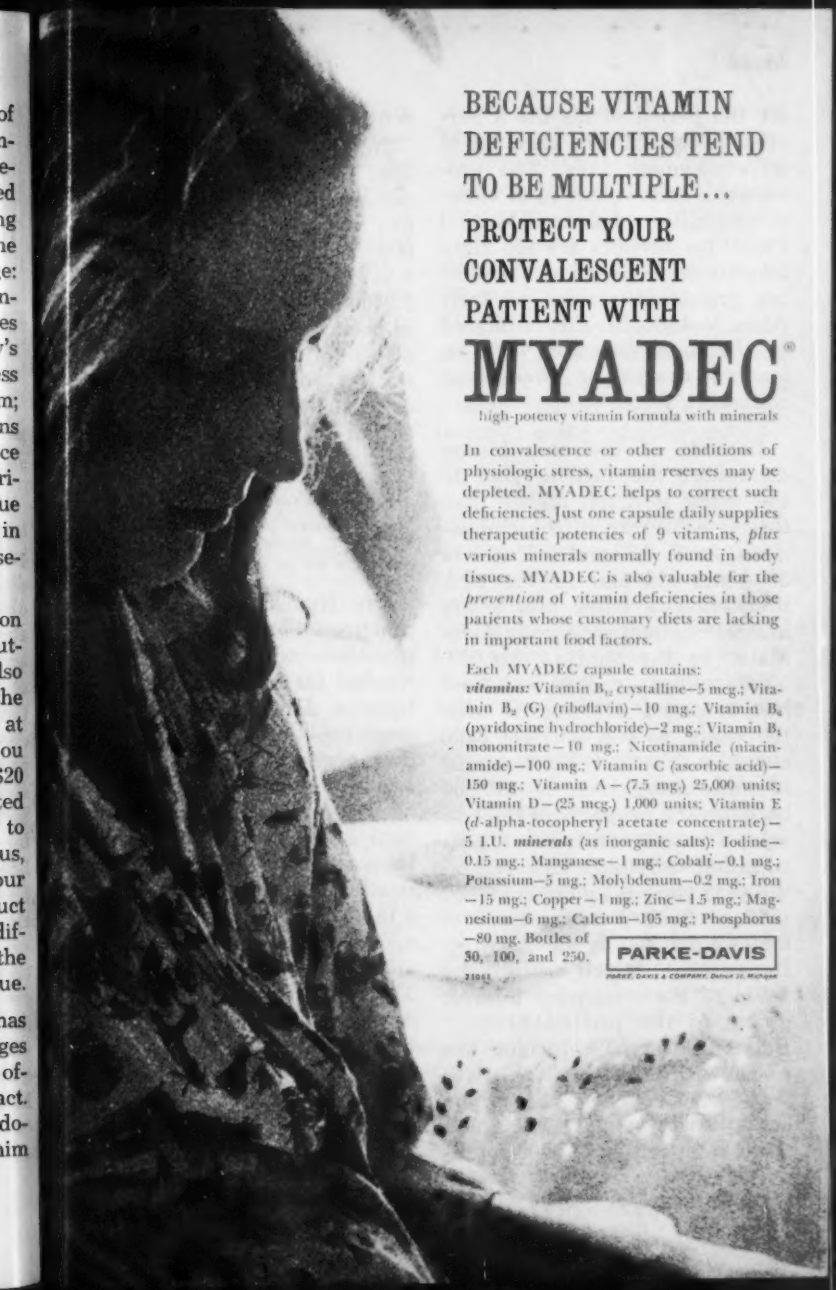
►*How you can help your college—and get a high return*◄

Accelerated tax rates as the income climbs the brackets have one compensatory feature. The value of a deduction likewise increases. Thus, gifts to colleges, schools, and philanthropic organizations have an appeal to exactly the group from which philanthropy has consistently obtained a steady source of funds.

Property in the possession of upper bracket taxpayers carries an additional advantage when used as a contribution. A gift need not be in money. Donated property is given a tax deduction at the current value of the property at the time of the contribution. This rule is of particular significance in an inflationary cycle. Appreciated securities are presently being used to a great extent in supporting schools and philanthropies. The donor gets a double advantage: He gets a deduction for the increased value of the securities —he gets a deduction for today's value of the securities regardless of what the property cost him; and he avoids the capital gains tax, the tax on the difference between his cost for the securities and their present value which would be applicable in any other disposition of the securities.

Not only is the contribution deduction available on an outright gift of the property, it also offers a tax advantage when the security is sold to the college at the donor's cost. Example: You own a stock which cost you $20 some years ago. Today it is listed at 50. You sell the security to your Alma Mater for $20. Thus, you are reimbursed for your cost. However, you can deduct on your tax return $30, the difference between the cost of the security and its present value.

The Mutual Fund idea has been adopted by many colleges and religious organizations in offering a life income contract. The university will take a donor's fund and return to him



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PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

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for the period of his life a percentage equal to the earnings of its endowment fund. The university's endowment fund closely resembles a balanced Mutual Fund. Its advisors are top-flight investment counsellors, rendering gratuitous service to their Alma Maters. All this is offered to the donor-investor with no loading charge or investment counsellor fee.

Because of the contribution deduction, the income paid to the donor is much higher than the stated return of the endowment fund. Example: You are 50 years old and in the 50% bracket. You enter into a life income contract with your Alma Mater in the sum of $10,000. Your college's endowment fund has averaged 4% return over the years, so you will get $400 annually. You get this for your lifetime, after which the $10,000 becomes the property of the college. You are entitled to a contribution deduction of $4,800 in the year you set up the contract. (This is figured on the basis of tables published by the Treasury Department which show the value of the remainder interest going to the philanthropy.) Being in the 50% income tax bracket, this deduction saves you $2,400 in taxes. Thus, your actual investment is $7,600, and the annual return of $400 represents not 4%, but 5.26%.

Now, suppose instead of giving $10,000 in cash, you give securities which cost you $6,000 but which now are worth $10,000. You get the same contribution deduction of $4,800, saving $2,400 in taxes, so that your out-of-pocket cost is $7,600. But you also save the 25% capital gains tax on your profit of $4,000—or $1,000. Now your investment is not $7,600, but $6,600—and the annual return of $400 on this is 6.06%.

►*Doctor acquires Social Security coverage as employee*◄

Dr. Huycke transferred his practice to Dr. Devoe, a younger physician who had previously worked for him. As part of the transfer Dr. Devoe agreed to work for 3 years for the younger doctor who was to pay him $100 a month for 3 years for purchase of his practice, goodwill and equipment. The older doctor was to receive a salary of $600 a month during the first year, $500 a month during the second year and $300 a month during third and final year of the agreement. The older doctor would take more time off, when convenient, than he had before.

The U. S. Court of Appeals holds the older doctor entitled to Social Security coverage as an employee. The transfer of his

practice and his employment by the younger doctor were distinct transactions and must be treated separately. The older doctor was permitted to treat patients as he saw fit, since the methods by which doctors work are directed by the standards of their profession and are peculiarly unsuited to direction and close control by an employer. However, the evidence showed that in many aspects of office procedure the younger doctor altered the practice formerly followed by the older one and substituted his own ideas. In addition, the older doctor was paid a salary and had no opportunity to share in the profits of the practice. A bonafide employment relationship was shown overwhelmingly, said the Court, and the older doctor was entitled to Social Security coverage. (Flemming v. Huycke, U.S. Ct. of Appeals, 9th Cir., 11/30/60.)

►*Starting a savings program for your child via custodian accounts*◄

The easiest way to furnish your child with security at adulthood or earlier is to start a savings program at the earliest possible date. But what kind?

Up until very recently, there weren't many alternatives. A bank savings account might be opened for the child, or U. S. Savings Bonds might be purchased in the child's name. These are common savings arrangements but they have distinct drawbacks presently as a long-term method of saving. Both involve savings in dollar obligations and are subject to the inroads of inflation.

As an attractive alternative, you might start a savings program for your child with stock investments, which promise protection against inflation and also tax benefits.

A few years ago, the only practical way of doing this called for the creation of a trust. That meant incurring legal expenses in drafting a trust agreement and costs for periodic accountings, bond premiums, etc. All states now have a practical alternative method for making a gift of securities to a child, eliminating the need for a trust. Gifts of securities to children under 21 can be made through a custodian account. The mechanics of opening a custodian account are extremely simple. A father wishing to open a stock account for his son could have the entire matter handled in a few minutes at his broker's office. He registers the securities in his name as custodian for the benefit of the child. As custodian, he can sell the securities, collect the sales proceeds and investment income, and use them for the child's

benefit or reinvestment.

There are some minor limitations placed on the custodian. He cannot take proceeds from sale of investment or income from investment to buy additional securities on margin. While he should prudently seek reasonable income and capital preservation, he generally is not liable for losses unless they result from bad faith, intentional wrongdoing, or gross negligence.

Although custodian accounts can be opened anywhere in the United States, the legal rules governing the account may vary from state to state depending upon which law is in force: Model Act or Uniform Act. They differ in that: (1) Under the Model Act, the donor can only appoint himself or a member of the minor's family as custodian. Under the Uniform Act, the donor may appoint any bank, trust company, or any adult as custodian. The donor can also deposit cash to the account, as well as securities. (2) Under the Uniform Act (but not under the Model Act) the minor, when he reaches 14, can ask the court to have the custodian use the account's funds for his support. The Model Act is limited to Alabama, Colorado, Georgia, New Jersey, Ohio, Rhode Island, South Carolina, and District of Columbia.

Do the differences between the two Acts call for different tax treatment? No. The differences affect only the custodian and his control over the custodian income. The income tax treatment is the same for both.

Tax Treatment and Advantages

As long as income from the custodian account is not used to discharge an obligation (e.g., a parent's obligation to support a child), income realized by a custodian account is taxed to the child. In most cases, that means no tax at all or only a minimum tax. Where income is accumulated for the child within the account, no Federal tax will be due until income received by the custodian currently in any one year exceeds $675. That is due to the fact that the child has a $600 exemption and automatically benefits from a standard deduction of $75 allowed by the government tax table. If all of the investment return received by the custodian account came from dividends paid by American companies, an additional $50 exclusion would be allowed. So where the custodian holds only stock investments, there would be no income tax until dividends received in a year exceeded $725. Even on income received in excess of that amount, tax would be at the very lowest

rates—with a 4% dividends received credit, 16% until income received by the custodian ran about $3,000 in any one year.

There is still an added income tax advantage. Even though the custodian accumulates a substantial amount of income for the ultimate benefit of the minor child, the child remains a dependent of the parent for tax purposes as long as he is under 19 or a full-time student. The parent is still allowed a $600 tax exemption for such child on the parent's Federal income tax return. That is so even if the giver of the securities is both the custodian and also the parent of the child.

When the minor reaches 21 and property in the custodian account is turned over to him, no formal accounting is required. The child, now an adult, can sign a simple release freeing the custodian from any liability.

However, even though no formal accounting may be required, the custodian should open a separate bank account and should keep minimum records, if for no other reason than tax record-keeping purposes. For instance, if income realized by custodian account in a year reached $600, a return for the child would have to be filed even though no tax was due.

Possible Gift and Estate Tax Liability

You may have to pay a gift tax when you set up a stock custodian account. But you can avoid gift tax by properly planning the purchase of securities for your children's accounts. Each year you can give up to $3,000 to one person and be free of any gift tax. If your wife consents to join with you in the gift, you can give taxfree up to $6,000 to one person. All you need do is add her annual exclusion to yours. And even if your gift to one person is over the $3,000 or $6,000 limitation, you may still avoid a gift tax. You can do this by applying part or all of your life-time exclusion. Here again, if your wife consents to the gift, you can apply a $60,000 lifetime exemption by adding her lifetime exemption to yours. By combining the annual exclusion and lifetime exemption, this year you can give up to $66,000 taxfree to one person as long as you have made no prior gifts which have been applied against you and your wife's lifetime exemption.

As for the estate tax, the value of a custodian account will be taxed to your estate if you die while acting as custodian of an account before your child reaches 21. But no estate tax is incurred if an estate is under

$60,000 because of the $60,000 exemption. And if an estate is between $60,000 and $120,000 and the maximum advantage of the marital deduction is taken, the estate tax liability is eliminated. Furthermore, if there's a chance the custodian account will be taxed to your estate, you may avoid the problem by not naming yourself custodian but by naming someone else, for example, your wife.

►*Indiscriminate commingling of doctor's funds with hospital accounts*◄

A physician in Chicago was the founder, director and sometimes president of a charitable hospital. During the years from 1944 to 1954, in addition to running the hospital, he took an active part in the management of six farms he owned in Illinois, he bought cattle, bought a ranch, a hotel and an apartment-hotel in Arizona. For all these transactions he borrowed various sums of money, including the hospital as a personal asset in applications for loans. From the hospital accounts, he paid bills for personal magazine subscriptions, auto repairs, auto fines, gasoline, new heads of cattle, a new barn for one of his farms, champagne and other liquors. From his personal accounts he paid bills for hospital equipment and other expenses. There was indiscriminate commingling of his personal funds with hospital funds. In the 10-year period under consideration by the Treasury and the Tax Court, about $520,000 of hospital funds were spent on personal living expenses, investments and Arizona real estate.

In addition to reconstructing the doctor's income for the period and assessing substantial deficiencies against him, the hospital lost its tax exemption as a charitable organization. Its taxable income for 10 years was determined on a net-worth basis. (Kenner, TC Memo 1961-37)

►*No income tax withheld on compensation of doctor engaged as company physician*◄

A physician engaged in private practice may also give part-time service to a company and examine and treat company employees. Is his company compensation subject to the income tax withholding requirement? No—if the company does not have the right to exercise sufficient control over the manner and means in which he performs his duties to establish an employer-employee relationship. Even when a doctor receives a regular monthly salary to treat the company's employees, his salary is not subject to withholding tax.

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in determining a doctor's status are:

1. Whether he is required to keep any definite hours.

2. Whether he may continue his private practice.

3. Whether he is paid by the employees of the company where the treatment does not fall within the scope of the contract (Rev. Rul. 84, 1953-1, CB 404).

The Treasury, however, will look to the facts of each case to determine whether an employer-employee relationship exists. Thus it rules that a licensed physician who is "in residency" at a hospital and does not have a private practice is an employee subject to the withholding of income for taxes. This is so even though his services are available to an organization on a part-time basis. The Treasury holds his services a part of his clinical training, arranged through the hospital and performed during certain hours on two days of each week. They are also terminable at any time. Under this fact pattern the doctor is an employee. (Rev. Rul. 57-71).

►*Doctor's contribution to research foundation disallowed*◄

When a taxpayer claims a deduction for a charitable contribution, he must show that he is entitled to it. A physician and his associates organized a research foundation in Cincinnati to maintain a laboratory for medical research and for tests on patients with arterial diseases. Patients paid a set fee which was on occasion reduced or waived, depending upon ability to pay. The doctors used studies made at the laboratory in practice, in classes taught at medical school, in lectures and writings for scientific journals. The founder and one other doctor received salaries from the foundation, although the founder continued in private practice. He made a contribution of $7,550 to the foundation and claimed it as a charitable contribution deduction.

The Treasury disallowed the deduction, and the Tax Court agrees. It holds that the operation of the laboratory served two purposes, research and treatment of private patients. The doctor did not show which was the primary purpose, and so failed to meet the test in the law that the laboratory was operated exclusively for charitable purposes. He did not show how many patients were treated at reduced rates as compared with those who paid the set fees, and so failed to meet the test of charitable purposes. Finally, he failed to show that he did not benefit commercially from the operation of the foundation, and so failed to meet the test of bene-

fit inuring to an individual. (John Joseph Cranley, TC Memo 1961-4, 1/18/61).

►*Contract medical practice a non-depreciable intangible asset*◄

Richard M. Boe and three other doctors as partners bought a contract medical practice from a retiring physician. The practice consisted of contracts to provide comprehensive treatment to patients who paid regular dues, usually 6 months in advance. The contracts were terminable at will, on notice given by either party. The purchase price for the practice was $272,389 of which $270,042 was stated to be a lump sum payment for good will, accounts receivable, contracts, supplies and covenant not to compete. There were 8,984 contracts outstanding, and the purchasers so arrived at a cost base of $30.10 for each contract. Then Dr. Boe and one of the doctors bought out the other two, incurred additional costs which they allocated to the originally acquired contracts and fixed a new base of $30.94. The partnership tax return reported the terminated contracts as "expenses" contending deductions should be allowed for the amortization of the cost of the contracts.

The deductions were disallowed by the Treasury, and the Tax Court agrees. These contracts are a single, collective, intangible asset that cannot be exhausted by time. Although they had fluctuating value by reason of increase in number, and decrease by terminations, they nevertheless had a continuing value and life. The Court holds that this value and life is incapable of being estimated. Therefore, no depreciation can be allowed. The cost of the contracts cannot be amortized. The aggregate of the contracts would not be exhausted until the practice became worthless or is disposed of. (Boe, 35 TC No. 79, 1/31/61).

►*90 Trusts for one son treated as one trust*◄

In 1945, a physician executed 90 trust indentures naming his son as sole beneficiary, and his son's father-in-law as trustee. He made out 50 checks for $300 each, 20 checks for $37 each, and 20 checks for $100 each, aggregating $17,740. On the same day, the named trustee gave the doctor 90 checks in identical amounts, drawn on his account as trustee (not yet opened). The next day, in consideration of the $17,740 in checks from the trustee, the doctor conveyed title to the trustee to his medical clinic building, equipment and other properties, valued in all at $28,300. The trustee immediately leased the clinic building to the doctor, resigned as trustee, and

the doctor named his wife (beneficiary's mother) as successor trustee. One month later, a trust account was first opened. The original trustee endorsed and deposited the 90 checks the doctor had given him, and the doctor cashed the 90 checks for $17,740 which the trustee had given him for the trust properties. The doctor's wife accumulated income in the one trust bank account and made one distribution to the beneficiary, in 1946. From then on, the trust account was no longer handled separately. The trustee did not file income tax returns.

The Treasury assessed deficiencies of $5,862.89 for the years 1945-1948. The doctor's wife as trustee then brought action in the United States District Court to recover the taxes as unlawfully assessed and collected. The trustee contends that the doctor had the right to establish 90 trusts to reduce the tax on income from the trust properties; that such right exists because of a loophole in the tax law—and that she had absolute right to take advantage of an existing loophole. The Court does not agree with her.

The Court says the multiple trust arrangement is a sham. The taxability of a transaction is to be determined by its true nature rather than its form. The scheme here is a mockery of the tax laws. The creation of 90 separate trusts for such a relative small amount of property is "preposterous and flaunts the statutory purpose of our laws." (Boyce v. U.S., U.S. Dist. Ct., WD La. 2/15/61) ◄

Cosmetic Management of Moles and Other Pigmentary Defects

All nevi showing changes such as growth, color or ulceration should be completely excised. Most nevi are easily treated by shave excision. Injection of a local anesthetic lifts the lesion, the elevated portion is sliced off level with the skin, and the bleeding base is coagulated. This leaves a minimal scar and provides tissue for pathologic study. No method for treating vitiligo or chloasma is completely successful in all persons.

Stegmaier, O. C., *J.A.M.A.*, 172:559-561,1960.

►Surgicel
(Johnson & Johnson)

Surgical dressing. Chemically, it is an oxidized, regenerated cellulose made in pure, uniform filaments. Does not fragment, conforms to body contours, readily adheres to wound surfaces but does not stick to gloves or instruments. *Indications:* To stem hemorrhage under operative conditions in the heart, liver, spleen, and other organs or parts of the body where ordinarily bleeding is frequently difficult to control by conventional methods. *Usage:* The dressing may be left in the wound, where it is absorbed by the tissues and completely disappears. *Supplied:* Knitted fabric strips, 2″ x 14″, 4″ x 8″, 2″ x 3″. Carded fiber pads, ¼″ x ¾″ x 3″.

►Conar Expectorant
(Massengill)

Combines noscapine, pheniramine maleate, phenylephrine hydrochloride, and glyceryl guaiacolate. *Indications:* To provide effective cough control with increased productivity. *Dosage:* To be individualized. *Supplied:* In gallon and pint bottles.

►Aquamephyton
(Merck Sharp & Dohme)

Injectable aqueous colloidal solution containing, in each 1 cc. vial, 10 mg. of vitamin K_1. *Indications:* For surgical and obstetric situations where there is bleeding or danger of hemorrhage because of low prothrombin level. To counteract prothrombin - depressing drugs such as coumarin compounds and indanediones. To supply vitamin K_1 when there is either lack of synthesis or absorption in the individual. *Dosage:* Varies with the condition to be treated and with the patient's response. *Supplied:* In individual 1 cc. vials.

►Es-A-Cort Lotion *(Dome)*

Each ounce contains 100,000 U.S.P. units of vitamin A, 56,000 I.U. of estrone and ½% micronized hydrocortisone alcohol. *Indications:* For relief of pruritus vulvae. Also useful in senile vulvovaginitis, postmenopausal vaginitis, kraurosis vulvae, and related conditions. *Dosage:* Apply sparingly to affected area twice daily. *Supplied:* In bottles containing ½ ounce and 2 ounces.

►Riopan Tablets *(Ayerst)*

Each tablet contains 400 mg. of monalium hydrate (hydrated magnesium aluminate). *Indications:* Conditions associated with gastric hyperacidity, such as gastric or duodenal ulcer, gastritis, heartburn, gastrointestinal disturbances resulting from dietary indiscretions, nervous disorders, food intolerances, excessive smoking, or alcoholic stimulation. *Dosage:* One or two tablets swallowed with water as required, preferably between meals and at bedtime. *Supplied:* In packages of 60 or 500 tablets, in individual filmstrips of 10 tablets.

►Aldactazide Tablets *(Searle)*

Each tablet contains 75 mg. of spironolactone and 25 mg. of hydrochlorothiazide. *Indications:* For the treatment of edema and ascites, including that resistant to conventional diuretics, resulting hepatic cirrhosis, the nephrotic syndrome, and idiopathic edema from congestive heart failure, *Caution:* Use with caution in treating patients with severe hepatic disease. One should be alert to the possible development of hyponatremia, hyperkalemia, hyperuricemia, hepatic coma, gastrointestinal intolerance, and known hypersensitivity reactions to the individual components of the tablets. *Dosage:* Adults, one tablet four times a day; the range may be from one to eight tablets. Children, from 3 to 6 mg. of spironolactone per pound of body weight daily. *Supplied:* In bottles containing 20 or 100 tablets.

►Desbutal Gradumets *(Abbott)*

Long-acting dosage form available in two sizes: Each *10 Gradumet* contains 10 mg. of *Desoxyn* and 60 mg. of *Nembutal.* Each *15 Gradumet* contains 15 mg. of *Desoxyn* and 90 mg. of *Nembutal. Indications:* In obesity, to depress the appetite and calm the nervous overweight patient. Also helpful in managing psychosomatic complaints, tension and anxiety states, and mild neurotic conditions. *Dosage:* Usual dosage is one tablet in the morning. *Supplied:* Either size, in bottles containing 100 or 500 tablets.

►Madribon Chewable Tablets *(Roche)*

New dosage form. Each chewable tablet contains 0.25 Gm. of sulfadimethoxine. *Indications:* For the treatment of urinary, respiratory tract, and soft tissue infections. *Dosage:* A single dose achieves rapid therapeutic blood levels that are maintained for a full 24-hour period. *Supplied:* In bottles containing 30 or 100 tablets.

►Zentron Liquid *(Lilly)*

Each 5 cc. teaspoonful contains 100 mg. of ferrous sulfate (equivalent to 20 mg. of iron) plus vitamin B complex and vitamin C. *Indications:* To correct iron deficiency and prevent vitamin B complex and vitamin C deficiencies. Also for anemic elderly patients who prefer liquid medication. *Dosage:* Usual dosage for infants and children is ½ to one teaspoonful (preferably at mealtime) one to three times daily. Adults, one to two teaspoonfuls (preferably at mealtime) three times daily. *Supplied:* Eight ounce bottles.

►Auracort Otic Solution *(Columbus)*

Each cc. contains 2.5 mg. of hydrocortisone, 2000 units of polymyxin B sulfate, 3.5 mg. of neomyin (as neomycin sulfate), 10 mg. of pramoxine hydrochloride, with propylene glycol and glycerin *q.s. Indications:* For the treatment of infection, pain, inflammation, and itching associated with otitis externa, otomycosis, and furunculosis. *Dosage:* Gently cleanse and thoroughly dry the ear canal, then instil three to four drops three or four times daily. If preferred, a gauze wick loosely packed in the affected ear may be kept moistened with the solution. *Supplied:* In 7.5 cc. spillproof, plastic dropper bottles.

►Tepanil Ten-Tab Tablets *(National)*

Each tablet contains 75 mg. of diethylpropion in a continuous release formulation. *Indications:* Wherever weight loss is desirable. Particularly useful in the treatment of obesity complicated by cardiovascular disease, hypertension, diabetes, or pregnancy. *Dosage:* One tablet at 10 a.m. daily. *Supplied:* In bottles containing 30 tablets.

►Dactil-OB *(Lakeside)*

Each tablet contains 100 mg. piperidolate hydrochloride, 50 mg. of ascorbic acid, and 50 mg. of hesperidin complex. *Indications:* For the prevention of premature delivery, in all obstetric cases where there is a history of unsuccessful pregnancies, or premature delivery or a diagnosis of the possibility of premature labor. *Dosage:* One tablet four times daily beginning with the diagnosis of possible premature labor and continuing until the 39th week of gestation or until delivery. *Supplied:* In bottles containing 100 tablets.

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Prescribe one ANTIVERT tablet (or 1-2 teaspoonfuls ANTIVERT syrup) 3 times daily, before each meal, for prompt relief of vertigo, Meniere's syndrome and allied disorders. Side effects are short-lived, usually only harmless flushing and tingling associated with vasodilation. ANTIVERT is contraindicated in severe hypotension and hemorrhage.

SUPPLIED: Small blue-and-white scored tablets (meclizine HCl 12.5 mg. and nicotinic acid 50 mg.) in bottles of 100. Syrup in pint bottles. Prescription only. Bibliography available on request.

And for your aging patients —
NEOBON® Capsules: five-factor geriatric supplement.

Reference: 1. Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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Science for the World's Well-Being®

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Each teaspoonful (5 cc.) contains 6.25 mg. meclizine HCl and 25 mg. nicotinic acid.

►Chemotherapy in Emotional Disorders: The Psychotherapeutic Use of Somatic Treatments

by Frederic F. Flach, M.D., F.A.P.A., Assistant Professor of Clinical Psychiatry, Cornell University Medical College, New York; and Peter F. Regan, III, M.D., F.A.P.A., Professor and Head of the Department of Psychiatry, University of Florida College of Medicine, Gainesville. The Blakiston Division, McGraw-Hill Book Company, New York. 1960. $10.00

Progress made in the last quarter century in dealing with mental and emotional illness has been so great that organization of the new data became necessary. The first section of this volume is devoted to principles and techniques involved in the full diagnosis of patients, the second section to the various physical treatments and their spheres of effectiveness, the third section to a blending of these considerations to illustrate the manner in which physical treatments can be used to enhance psychotherapeutic treatment. The third section will be the one to attract the attention of most doctors. There they will find instructions for the application of therapeutic measures, probably new to them, and in their integration. The doctor will have an opportunity to evaluate these treatment measures in patients whose cases he has diagnosed.

►Radiation Protection and Dentistry

by Arthur H. Wuehrmann, D.M.D., University of Alabama School of Dentistry, Birmingham. Illustrated. The C. V. Mosby Company, St. Louis, Missouri. 1960. $6.50

The book emphasizes the need for the greatest care that a patient be done no harm by exposure to x-rays. Note is taken of the great publicity now being given to injuries so inflicted and the resultant suspicion and aversion. Fundamental effects of radiation on matter are described; then come chapters on the physical principles involved, possible injurious effect, prevention of radiation injury, and the legal aspects. A glossary will be found useful by many. An appendix gives most recent authoritative information on maximum permissable exposure of man.

Unless your practice is limited to bacteriology . . . or your patients are all in the upper income brackets . . . you have doubtless received complaints about the cost of the medication you prescribe.

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Some of these complaints can probably be dismissed lightly as coming from cranks, who would complain about your fee for a midnight house call to save the life of a dying child. Others, however, are made seriously by thoughtful patients and deserve an answer in kind. You know what the patient gets from his pharmacist because you have prescribed it. Do you also know that the average cost of a prescription is about $3.00? Only about one in 100 costs $10.00 or more, and 3 out of 5 of the prescriptions are under $3.00. These figures are based on retail prices. They include the manufacturer's research, development, and manufacturing costs and all distribution costs of the wholesale and the retail druggist. Only you and your patients can judge whether today's drugs at these prices represent a fair *quid pro quo,* an equitable balance between what is given and what is received.

This message is brought to you by 138 producers of prescription drugs as a service to the medical profession and in the same spirit, it is carried by this publication. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

►Heart Sounds and Murmurs: A Clinical and Phonocardiographic Study

by P. A. Ongley, Consultant in Pediatrics, Mayo Clinic, Rochester, Minn.; M. B. Rappaport, Former Head of Department of Electrophysiologic Research, Sanborn Company, Waltham, Mass.; Howard B. Sprague, Board of Consultation, Massachusetts General Hospital, Past President, American Heart Asso.; A. S. Nadas, Cardiologist, Childrens Hospital, Boston. Grune & Stratton, New York. 1960. $9.75

A hundred years ago most of the diagnoses in heart disease were by the sounds heard over the organ. As the disease advanced, in a large number of cases edema developed to such a degree that the diagnosis was changed to dropsy. Fifty years ago little significance was attached to murmurs, unless accompanied by definite enlargement. Since the introduction of the electrocardiograph and other means of precision, and the keeping of accurate records in thousands of cases, heart murmurs have to a great extent regained their repute as diagnostic indices. From introduction to "Section 6: Miscellaneous," this volume is packed with worthwhile information from a group of the world's greatest authorities.

►Clinical Bacteriology

by E. Joan Stokes, M.B., F.R.C.P., Clinical Bacteriologist, University College Hospital, London. Foreword by A. A. Miles, C.B.E., M.D., F.R.C.P. Edward Arnold (Publishers) Ltd., London. The Williams & Wilkins Co., Baltimore, exclusive U.S. agents. 1960. $7.00

I would accept this book as authoritative in its field on these two bits of evidence: (1) it is written by a staff member of University College Hospital, London, and (2) it is a small book, about a fourth the number of words as would have been used by others less authoritative writing on the subject.

►Fundamentals of Chest Roentgenology

by Benjamin Felson, M.D., Professor and Director, Department of Radiology, University of Cincinnati College of Medicine, with 450 illustrations. W. B. Saunders Company, Philadelphia and London. 1960. $10.00

The author tells what considerations caused him to undertake this work, how he planned it, and how he carried out his plans. The book is intended for cover-to-cover reading and, "subsequently, as an unobtrusive consultant."

►Occupational Diseases and Industrial Medicine

by Rutherford T. Johnstone, M.D., Clinical Professor of Preventive Medicine and Public Health and Clinical Professor of Medicine, University of California at Los Angeles; and Seward E. Miller, M.D., Professor of Medicine, Medical School, Professor of Industrial Health, School of Public Health, University of Michigan, Ann Arbor. W. B. Saunders Company, Philadelphia. 1960. $12.00

The practitioners of general medicine in the United States are now caring for the majority of industrial workers who frequently sustain injuries and for those who sustain injuries produced by the great variety of chemicals, detergents, metal polishes, and pesticides in use on farms and in homes. The multiplicity of the features of practice as they relate to industry and to our industrial society are discussed, as well as the clinical approach to occupational diseases, providing a complete coverage. Attention is called to the scope and the wide clinical approach of the material on occupational diseases, not only chemical intoxication, but occupational infections, cancer and other disease conditions resulting from exposure to physical forces in the work environment. Industrial hygiene principles are reviewed. A book on a subject of such wide interest, by authorities of such high repute, cannot fail of a wide welcome.

►Healthy Babies: Happy Parents

by Henry K. Silver, M.D., Professor of Pediatrics, and C. Henry Kempe, M.D., Professor and Chairman of the Department of Pediatrics, University of Colorado School of Medicine; Ruth Svibergson Kempe, M.D., formerly Chief of the Division of Mental Hygiene, Department of Public Health of the City and County of San Francisco; foreward by Grover F. Powers, M.D., Professor Emeritus of Pediatrics, Yale University School of Medicine. Illustrated by Marty Links. The Blakiston Division, McGraw-Hill Book Company, Inc., New York. 1960.

A good common-sense book written by doctors who know the dangers of iron-clad rules, how to vary management in different cases, and that natural inclination is usually healthful. The book will prove a joy to the mother of a first child, and a boon to the child itself. Many a mother of several children will learn much to the advantage of herself and a new baby from perusing its pages.